

Scale AVIATION Modeller

Emperor's Wings

Peter Fearis continues his series on Japanese types of WWII with a look at the new Ki-45 from Hasegawa



P-80 Scale Plans

Colin Owers scales the 'Shooting Star' in 1/72nd scale

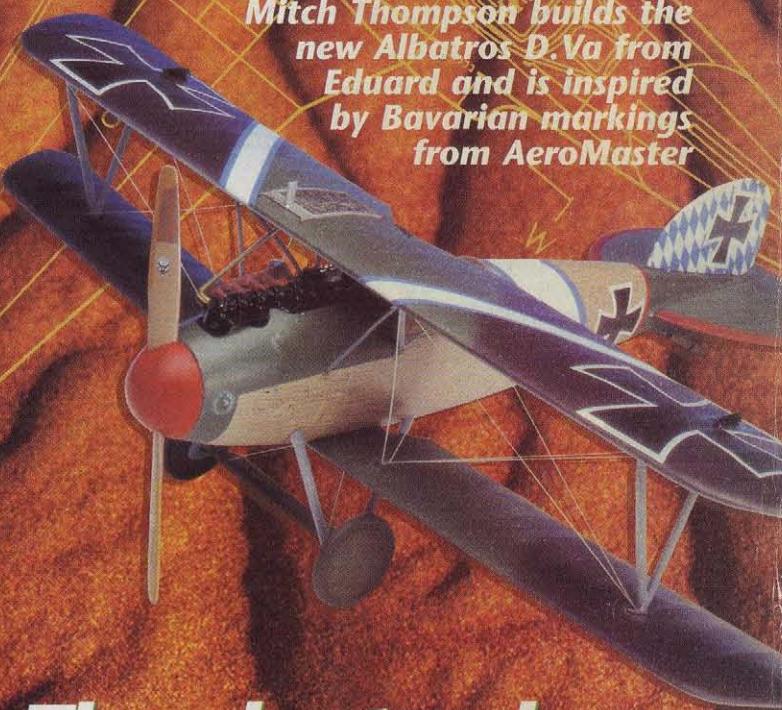
shown



Camouflage & Marking Notepad
Colour prints and photos from Michael Payne

BAVARIAN BEAUTY

Mitch Thompson builds the new Albatros D.Va from Eduard and is inspired by Bavarian markings from AeroMaster



Thunderstreak

Colin Peck builds the Monogram F-84 and details with Superscale decals



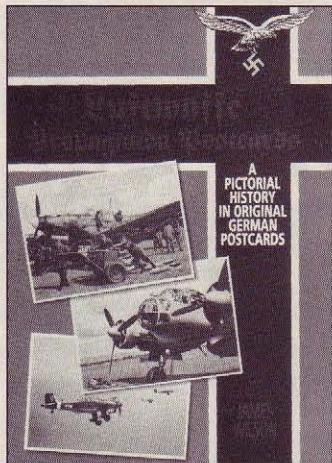
Aircraft Sketchpad

Steve Benstead takes a look inside the Kawasaki Ki-45 Toryu



Airlife

BOOKS FOR THE AVIATION MODELLER



Luftwaffe Propaganda Postcards

James Wilson

A pictorial history of the Luftwaffe that utilises original German postcards produced to promote the technical achievements and might of the Luftwaffe between 1933 and 1945.

- Many postcards have never before appeared in a published form since their original release.
- Also includes information about obscure machines on which information is limited.
- Over 230 b/w photographs.

144 pages, HB, 1 85310 727 1

£19.95



Warplanes of the Luftwaffe

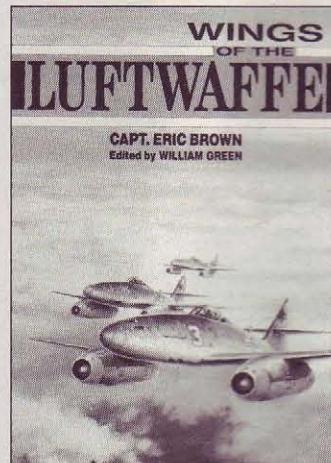
D. Donald & J. Lake

A complete and comprehensive reference work to the combat aircraft used by Hitler's Luftwaffe during WWII. Arranged as an alphabetical encyclopaedia, the work covers the 35 major aircraft types in great detail, the text providing development and service history, variants, combat achievements and technical description. Thirty further types of only minor importance are described in a separate section.

- 29 three-view drawings of the major Luftwaffe aircraft.
- Full specification for every aircraft.
- Rare photographs of Luftwaffe aircraft.

256 pages, HB, 1 874023 56 5

£24.95



Wings of the Luftwaffe

Capt Eric Brown

Capt Eric Brown flew no fewer than 55 individual German aircraft types. In *Wings of the Luftwaffe* he has selected what he considers to have been the most important aircraft employed by the Luftwaffe during WWII and describes their background and their characteristics.

- Over 200 B/W photographs.
- 3-view drawings of 17 aircraft types.
- Cutaway drawings of each aircraft described.
- Cockpit layout and instrumentation drawings.

176 pages, PB, 1 85310 413 2

£14.95



How To Build Plastic Aircraft Models

Roscoe Creed

Explains the basics of building the simplest plastic aeroplane kits, then turns to surefire ways to improve skills with advanced projects.

- A complete how-to-do-it guide to basic and advanced modelling techniques.
- Masking and painting for professional results.
- Metallic finishes and weathering.

60 pages, PB, 0 89024 065 5

£8.95

Hints And Tips For Plastic Modeling

Roscoe Creed

Loaded with 225 tested tips and techniques for all-level modellers. This illustrated reference book covers equipment, assembly, masking, painting and canopy construction.

- Tool and workbench equipment.
- Weathering and figure painting.
- Displaying and caring for your models.

50 pages, PB, 0 89024 546 0

£5.95

Detailling Scale Model Aircraft

Michael Ashby

For modellers who want to advance their modelling skills, from scratchbuilding and modification to painting and decals, this handbook is an authoritative and essential guide.

- All the skills and techniques needed to create accurate, realistic scale aircraft.
- Over 240 photographs in close-up detail.
- How to remove seams, rebuild a cockpit, detail guns and gunsights.

104 pages, PB, 1 85310 552 X

£14.95

All Airlife books are available from good booksellers. In case of any difficulty, they may be obtained direct from the Publishers:

Airlife Publishing Ltd.

101 Longden Road, Shrewsbury SY3 9EB
Telephone: (01743) 235651. Fax: (01743) 232944

All prices and publication dates may be subject to alteration.

Add £2.50 per title for post and packing. Payment by cheque/postal order/Access/Visa accepted.



Published by:
SAM Publications
DMZee Marketing Ltd
24 Grove Place
Bedford MK40 3JJ
Telephone: 01234 216016
Fax: 01234 261251
Email: dmzee@kbn.co.uk
Advertising: Nicky Kaler

Editor
RICHARD A. FRANKS

Technical Illustrations
PETER GREEN
RICHARD J. CARUANA

Aviation Illustrations
STEVE BENSTEAD

Cartoonist
ANDREW BATCHELOR

Contributors
Peter Cooksley; Steve Ellen
Peter Fearis; Paul Gold;
Colin Owers; Michael Payne;
Colin Peck; Mitch Thompson;
Fred Tooke

Contributions and photographic material are welcome, but must be accompanied by adequate postage to cover return. SAM Publications accept no responsibility for loss or damage to materials supplied.

© SAM Publications 1996
Articles, photographs and drawings published in Scale Aviation Modeller are protected by copyright. Reproduction in whole or in part is forbidden without prior authority of the publishers. Opinions expressed by contributors and advertisers are not necessarily those of the editor or publisher. DMZee Ltd reserves the right to suspend or refuse any advertisement without giving reasons. Whilst every care is taken to avoid mistakes DMZee Ltd cannot be liable in any way for any errors or omissions. Nor can the publisher accept responsibility for the bona fides of advertisers.

Cheques/Money Orders in Sterling only made payable to SAM Publications and sent to the address above.

North American Subscriptions are now handled by
WISE OWL WORLDWIDE PUBLICATIONS
4314 W. 238th St, Torrance, CA 90505, USA.
Telephone: 310-375-6258
Fax: 310-375-0548
9am-9pm Pacific time,
seven days a week
- VISA/Mastercard accepted.
Air \$72.00 Surface \$56.00

Contents

SCALE AVIATION MODELLER Vol. 2 Issue 6 June 1996

EDITORIAL

Having waffled on a good old bit last month I will not put you through that again this month. As you will have already discovered this month's edition comes with a free gift. I know that it has been a long time coming but I hope you will agree that part two of the booklet on training in the Luftwaffe is well worth the wait. The first part was published with the April 1995 edition and before any of you who have missed it rush off a back issues order, don't bother as that copy is well out of print.

We have received quite a mass of review samples over the last month or so and although the vast majority are being built we are still in need of a good vac-form modellers and someone with a love for WWI types in 1/72nd scale. If this sounds like a job you would enjoy then

drop me a line at the editorial address.

It is with pleasure that I welcome Paul Gold and Steve Ellen to our reviewing team. Paul likes all things in 1/144th scale or smaller and Steve likes just about anything, well that's what Mitch said - maybe I misunderstood him! Anyway welcome chaps and we look forward to your continuing review work in future editions. Finally I would like to introduce a new artist to this title, a very famous name in the form of Colin Owers. Colin's P-80 drawings appear this month and we have a lot planned from him in the coming month.

Until next month....

Richard A. Franks
Editor

NEWS & REVIEWS

324..... News Update

All the latest news and information from around the world

327..... Previews

An initial look at some of the recent kits we have received for review

328..... Reviews

The editorial team builds some of the most recent kits

342..... Accessories

All the latest from Paragon, HitKit, PWMP and Kendall

346..... Decals

A wide selection of the latest sheets



FEATURES

352..... Emperor's Wings - Part 4

Continuing this series, Peter Fearis looks at the new Ki-45 from Hasegawa

356..... P-80 Scale Plans

Colin Owers scales the P-80

359..... Bavarian Beauty!

Mitch Thompson takes a look at mixed media modelling with the new Albatros D.Va from Eduard and gets all inspired thanks to some AeroMaster decals

364..... A Heinkel That's Different

Peter Cooksley looks at this classic German bomber with particular reference to the preserved example at Hendon

366..... Colour & Marking Notepad

Michael Payne offers the modeller a selection of colour photographs

368..... Thunderstreak

Colin Peck builds the Monogram F-84 Thunderstreak in 1/48th scale and brightens it up with the help of some Superscale decals

372..... Aircraft Sketchpad

In this very popular series, Aviation Illustrator Steve Benstead looks at the interior of the Kawasaki Ki-45 Toryu



REGULARS

376..... Modelling Book Shelf

379..... Readers' Classified Advertisements



News Update

AeroMaster

A new special decal set will soon be released and it will deal with the Battle of Britain. Initially the set will be in 1/48th scale and it will consist of markings for 20 machines and these will include the customary smattering of Bf 109's, Bf 110's, Spitfires and Hurricanes. To go along with this will be a new series entitled 'Planes the Aces Flew'. The first sheets will offer three to five options each and they will cover a specific ace. The first offerings are Adolf Galland, Werner Mölders and Manfred Von Richthofen.

I don't have prices for any of these sheets yet so you should contact their UK importer, H.G.Hannant Ltd, for more details.

Aires Hobby Models

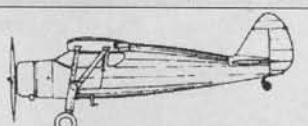
Having produced some superb resin upgrades for the Hasegawa Ju 87 in 1/48th scale they have now announced a Pratt & Whitney R-2800 (£5.60) and Junkers Jumo 213 (£3.45) in 1/48th scale. In 1/72nd scale there will be a Grumman Avenger cockpit set (£5.60) and a similar set for the F4U-5 Corsair (£3.45). The source for the above prices is H.G.Hannant Ltd.

Air Craft Models

Although the promised DH91 Albatros did not get released at the Southern Expo I am sure there are many who are only too pleased to wait a little longer. In 1/144th scale there will be a Junkers Ju 90 from this source.

Aircraft In Miniature

One of the more recent issues from this company is the Fairchild F24 in 1/72nd scale. The kit is vac-formed and it comes with metal undercarriage and propeller. There are decals for two RAAF machines as well as one which was operated by Cambrian Airways. Either the Argus radial or in-line Ranger powered versions can be made from this kit and it will cost £7.93 plus postage.



Kits due for release this year will include the Cierva C-30 Autogyro, Pilatus Turbo Porter, Curtiss Condor, Stinson A and Cessna Bobcat/Crane all in the 1/72nd scale 'Historic Wings' series. In the similarly scaled 'Transport Wings' series there will be the 727-100, 727-200 and DC-9 Series 30/C-9 Nightingale.

Airmodel

Here is a company I rarely mention. The latest from this company is the

Messerschmitt Me P.11112 V1, the Henschel Hs P135 and the Piaggio P.108B. Each kit is to 1/72nd scale and the first two feature metal undercarriages. The P.108B has a vac-formed fuselage and wing, injected engines, wheels, guns etc and it also includes decals. The price for these kits are £19.95, £17.95 and £26.95 respectively. The UK source for the range is H.G.Hannant Ltd.

Archer

You may remember me mentioning this American decal manufacturer a while ago. Well details have now reached me about their very special series of decals and artwork. The sets consist of full decals including stencils, full colour instruction sheets and aircraft and unit history. The entire thing is packaged in a clear, 3-ring archival quality binder. So far the topics covered are restricted to the B-24 and either those of the 380th or 494th Bomber Groups. The machines covered are: 'Flak Fled Flapper' B-24J-160-CO, 528th BS, 380th BG; 'Net Results' B-24M-5-CO, 528th BS, 380th BG; 'Queen of the Strip' B-24M-20-CO, 529th BS, 380th BG; 'Playmate' B-24J-180-CO, 867th BS, 494th BG.

So sure of 100% accuracy are this company that they offer a money back guarantee as well as an assurance that if they are wrong they will change the product accordingly! The price of accuracy and presentation is high though and each of the sets costs \$39.95 plus \$5.00 postage. If you are interested contact them at:

• 11629 James Grant Drive, El Paso, TX 79936, USA.

Arnis Draugs

This is a new company from Latvia offering 1/72nd scale aircraft kits. The first listed are the Tu-16, Su-34, Yak-28PM and MiG-23P. I have no details as to the model type or of a source in the UK. Prices are listed as low as the equivalent of £3.00, so they are probably vac-formed (but I may be wrong!).

Atelier Noix

Mentioned in the Italian Update in the April edition, this Japanese resin kit manufacturer has listed quite a few new kits for 1996. All of the kits are to 1/48th scale and include metal detail parts. The kits include the Curtiss CR-1/CR-2, Macchi M.67, Supermarine S.4, Gloster IIIA and Laird-Turner LTR-14. The price quoted for each is 8,000 Yen, so work that out to the current exchange rates.

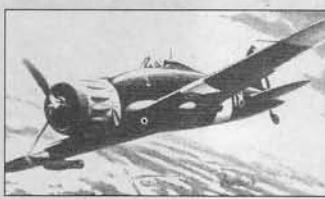
Hitkit

Apart from the new Albatros (Oeffag) D.III kit previewed elsewhere, this Polish company have announced a series of the above type in either 153 Late, or 253 series

types. These will be followed by the Potez XXV, Spad 51, Spad 61, Schreck FBA 17 HMT-2, HE-2 or HMT-4, Potez XV and XXVII. Ansaldo SVA 9/10, Ansaldo A.300 and the Yugoslav Breguet 19. Each kit is limited-run injection moulded plastic with etched brass detail parts and a comprehensive decal sheet. The UK importer for the range is H.G.Hannant Ltd, so give them a call on 01502 517444 for more details.

Astrokit

Apart from their excellent resin Macchi C.200 series in 1/48th scale (see 'Spotlight' elsewhere) this Italian company are listing a Bf 110C/D and Bf 109G in Italian and German markings in 1/48th scale. I suspect



these will be based on someone else's kit and therefore be injected but I may be wrong and in that case they would be all resin. In 1/72nd scale injected plastic there will be a Agusta-Sikorsky SH-3D/3DH helicopter.

AV RESIN

The latest couple of 'Luftwaffe 46' kits from this company are the Horten Ho 229V1 glider, the Junkers EF.126 and the EF.127. Each resin kit comes with metal parts and decals and they should cost £15.95 each. The UK importer for the range is H.G.Hannant Ltd.

Belcher Bits

This is a Canadian accessory company and some of their projects for 1996 will include a 1/48th scale Sikorsky HO3S (S-51 Dragonfly) as a complete resin kit and a Canadian Navy TBM-3/AS-3 conversion in 1/48th and a CH-146 Griffon/Bell 412 conversion in 1/72nd. These will also be

made in resin. I do not know of a UK source so you may wish to contact the company direct at:

33 Spruce St, Stittsville, Ontario, K2S 1P3, CANADA.

Bronto Models

Another new company to me and this New York based firm are offering resin conversions for aircraft. The sets due in 1996 include the Su-25TM, AV-8B Harrier II Plus and KC-130 refuelling pods. All of these are to 1/72nd scale and if you want to know more you can contact the company at:

36 Simonson Place, Staten Island, NY 10302, USA

Broplan

This Czech firm has been around for quite a while now and some of the planned kits for 1996 include the PZL P.7a (May/June), P.11a (June) in 1/48th scale and the Fairchild Swearingen Metro III (May) and Metro III TP88 AWACS (May) in 1/72nd. Recently released are the Heinkel He 5/T Hansa (S5c/S5D) (£10), He 5/T Hansa (S5A) (£10), SAAB B18A/S18A (£10), SAAB B18B (£10), Lublin R.VIIIb/ter (£10 each) all in 1/72nd scale. Each kit is vac-formed with injected detail parts. There is no UK importer for the range at present so if you want examples the prices quoted are direct from the manufacturer. Contact them at:

Broplan, ul. Pilotów 10 G/33, 80-460 Gdańsk, POLAND.

Aviation USK

Apart from the 1/72nd scale B-32 Dominator which has been mentioned in the past this firm will also release a Ro-43, SM-82 and Fiat RS-14 during 1996. Each kit is to 1/72nd scale and they are limited-run injection moulded plastic with etched brass and decals. The UK importer for the range is IW Models.

Noted in one of their recent adverts was mention of a series of resin kits in 1/48th scale from an unidentified Czech source. The types mentioned were the Salmson 2A-2 (£29.00), Phoenix J-1 (£29.00) and the Dornier Do 17Z 'Nachjagd' (£66.00).

Combat Models



This American firm make large scale vac-formed kits and some of the new ones due for 1996/7 are the MiG 15, Su 7, A-26B/C Invader, Do 217E/K, D4Y2 'Judy', He 100, He 51, Ki-45 'Nick', Vultee 'Vengeance', P-63 Kingcobra, A-20 'Havoc', Breda 88, Sikorsky S-39, P-47N, B-24D/J and Yak 9 in 1/32nd scale. In 1/48th scale there will be the Grumman G-149, HU-16B

Albatross, Do 24, Martin B-10, B-18 Bolo, S2F Tracker, Grumman JRF Goose, Sikorsky S-39 and Cant Z.1007 'Alcione'. These basic vac-formed kits are meant for use with the resin update sets available from Marine Air Products (See elsewhere). If you want to know more about the range contact the firm at:

400 3rd Street, West Easton,
PA 18042, USA.

Execuform

This American vac-form kit manufacturer lists the Northrop Alpha and North American XB-28 for release in 1996. Each kit is in 1/72nd scale and the range can be obtained in the UK via IW Models.

Condor

This Czech company produce full blown production injection moulded kits and the next couple of releases from them will be the North American Mustang IA and the North American A-36A Apache in 1/72nd scale. Once again for more details contact H.G.Hannant Ltd.

Dynavector

Following on with the great success of their superb Sea Vixen many of you will know that the next kit in the range will be the Supermarine Scimitar. This will be followed however by the Gloster Javelin and the Grumman S2F Tracker. The Scimitar should be available any day now but the Javelin is not due until September and the Tracker in December.

Cooper Detail

With the success of their 1/48th scale Westland Whirlwind this firm has announced that it intends to do the DH Hornet F.1/F.3 and the Sea Hornet FR.20/NR.21/PR.22 in the same scale. Each kit is not due until later in the year and the cost of each should be about £50.00. As well as vac-formed major parts the kit will have resin, metal and etched brass detail parts as well as a nice decal sheet. If you are interested in any of the Cooper range contact Avia Imports.

Eduard

Having already admitted to having got my wires crossed last month I can now confirm that the 1/48th scale kits due from this source are the Tempest V, Yak-3, Albatross D.III, Henschel Hs 132 and the Heinkel He280. Did I say a He 280 in 1/48th? YES! All of the strip-down kits mentioned last month are still due from this source.

Euromodel

This is a Polish company and they intend to release three new aircraft kits this year. The

first is the PZL P.24G and this will be followed by the MiG-21PFM Block 94N and the AH-64D Apache. Each are 1/72nd scale, although I have no idea of kit type. If you want to contact the company then write direct to:

P.O Box 168, 33100 Tarnow UP 1,
Poland.

Collect-Aire

Another of this companies series of very limited resin kits has just been announced. It is the Republic F-84E/G Thunderjet and it will be in 1/48th scale. The kit is resin with metal detail parts and ScaleMaster



decals. Markings for Egyptian, Greek and French versions are included and the package is completed with full colour custom artwork on the box top. As usual only 200 will be available worldwide and the price therefore reflects this at \$99.95 plus \$15.00 shipping. If you want to know more about the Collect-Aire range you can contact them at:

166 Granville Lane, North
Andover, MA 01845, USA.

Extatech

This is a new name to me and they deal with etched brass, surprise, surprise! Two of their most recent releases are both in 1/72nd scale and they are for the Italeri Hs 129 (set No O-25) and the Supermarine Spitfire Mk I-V (Set No O-26). I do not think anyone imports this range into the UK so if you are interested in the range you can contact them at:

Podstránská 7, 627 00 Brno,
Czech Republic.

FM Models

Having released a superb 1/32nd scale vac-formed kit of the Boomerang a few years ago this Australian company intend to release similar kits of the AT-6 Texan and CA-16 Wirraway. Each kit will include resin and metal parts and the kits were available in the UK last time from IW Models.

Golden Wings

This is part of the series of vac-formed kits made by Maintrack Models and the next release will be the Grumman F9F-8/8P Cougar in 1/48th scale. The kit will consist of vac-formed plastic for the main pieces with resin and pewter used for detail parts. The kit should be about in June and the price will be £19.99.

High Planes

Following on from the DAP Beaufighter and Beaufort I mentioned last month this company will be releasing a Wackett trainer, F4U-7 Corsair, Messerschmitt Bf 110G-4, Beaufighter II and Turbo Porter during 1996. Each kit is injection moulded plastic and is in 1/72nd scale. Prices look to range between about £12.00 and £20.00 for the kits mentioned.

HIPM

I do not know if this Czech company is producing kits as injected plastic or resin but they have listed the Vought Vindicator, Arado Ar 196 and Reichenberg all in 1/48th scale for 1996.

Hitech

A new range of injection moulded kits is due for release in the near future from this French company. Although my current information is that the kit is somewhat delayed I still feel it needs a mention. The first release will be the Bell P-63 Kingcobra in 1/48th scale and it will consist of injected wings and fuselage, resin wheels, cockpit tub, etched instrument panel, vac-formed canopy and metal propeller, control column etc. The UK price seems to be £24.95 and the UK importer for the range is Hannants. The latest in HiTech's resin upgrade sets is one for the excellent 1/48th scale Albatros D.V by Eduard (See article). This new upgrade includes a resin engine, new rudder and seat etc and the UK price is £11.50. Already available in the UK are the new sets for the Hobbycraft F4U Corsair range (£14.40) and the Tamiya MiG 15 (£9.95).

Classic Airframes

Hopefully by the time these words are read the new Macchi C.200 'Saetta' will have been released in the UK. The kit should be £18.95 and if you are interested in any of the range you can contact either Four Plus UK or H.G.Hannant Ltd for more details. Last month I got a bit muddled and listed some of the Classic Airframe releases under the Eduard section. To straighten it all out the



releases due from this company in 1996 are as follows (all to 1/48th scale): MiG-3, Polikarpov I-153, Heinkel He 51 Heinkel He 112 and Fiat G.55. All of these kits should be about the same price as the C.200.

Hobbycraft

I have already mentioned the aircraft types due from this company in a previous News Update but details have now arrived with

regard to the specific types that will be covered. In 1/48th scale there will be a P-40B called 'Pearl Harbour Defender', P-40C 'AVG Tiger Shark' and an RAF Tomahawk Mk.1. In 1/72nd scale there will be the C-45F, DNC-3 Otter and a series of Bf 109s including the G-3/4, G-6, G-14, G-10 and K-4.

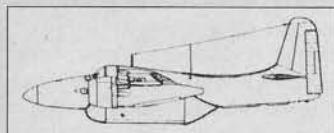
Hobbymodellbau

This German firm produce vac-formed kits and in 1996 they are listing the Bf 109B/C/D, Bf 109T, Bf 109Z and Focke-Wulf Fw 190V18 all in 1/32nd scale. I have no knowledge of a UK source for this range so you may wish to contact them direct at:

Neustadter Strasse 65A, 67112
Mutterstadt, Germany.

Lone Star Models

With the release of the Tigercat in 1/48th scale by AMT it could not have been long before a fire bomber conversion came out and here it is. Available as a simple two piece resin component the conversion costs just \$10.00 plus postage and if you want a copy I suggest you contact the company direct at:



13758 Drakewood, Sugar Land,
TX 77478, USA.

Planned for the rest of 1996 by this firm are a Macchi M.5, Grumman XF5F Skyrocket, Sopwith Baby, Felixstowe F.2A, Junkers J.9 and Hansa-Brandenberg W.29. All of these kits are 1/48th scale mixed-media with vac-formed plastic, resin and etched brass components.

Kendall Model Company Inc

Mentioned in the News pages of the April edition (See Page 196-7) were the new 1/48th scale MiG-15bis and Sukhoi Su-27 B 'Flanker' upgrades in 1/48th scale. These sets are now in the UK and the price is £17.25 each. Comprising resin and etched brass components, the sets are well worth considering, especially the Flanker set as no one else seems to have done anything for the excellent Academy kit to date. The UK source for the range is Hannants and the prices quoted above are from this source.

Koster Aero Enterprises

Apart from my comment on the new 1/48th scale Siemens Schuckert D.IV mentioned last month, there will also be an Hs 293 glide bomb (\$3.50) in the same scale. This will be followed by complete kits of the Lockheed PV-1 Hapoon, Focke-Wulf Fw 200 Condor and Junkers Ju 52.

KL Productions

This American firm make resin conversions and in the future they will release sets for the F4F-3S 'Wildcatfish' in both 1/32nd and 1/48th scales.

KP

It has been a while since we heard anything from this company so I am glad to say that they are producing a 1/48th scale Sukhoi Su-22. The kit is injection moulded plastic and it should retail for about £22.50.

Krak Models

This is a new name to me and apparently they produce resin kits complete with metal detail parts and decals. The first couple due for release are the Breda 27M, Nakajima A2N1, Nakajima A4N1, Nakajima Type 91 and Savoia Marchetti SM.41. Each is to 1/72nd scale and although I have no confirmed prices as yet you may like to contact their UK importer, H.G.Hannant Ltd, for more details.

La Cuca Racha

This Italian resin kit manufacturer was mentioned in last months 'Italian Update' (See Page 238-239) and for the rest of 1996 they will be issuing the following kits, all to 1/72nd scale. Fiat G.50, Breda Ba 65K/14, Caproni Ca 100, Reggiane Re 2005, Fiat G.50 Pre-series, Romero Ro 43 & 44 and the Fiat G.59 4A.

LB Italian Wings

Also mentioned in the 'Italian update' was this company and on top of the kits mentioned in the feature they will also issue the following, all in 1/72nd scale. Piaggio P119, Israeli F-16C/D conversion, Imam Ro 41, Macchi C.200 1st Series and the Savoia Marchetti SM.84.

Roseplane

With the move to resin kits this American company have just released a 1/72nd scale kit of the Pfalz E.IV. The kit is supplemented with etched details but does not include any



decals. So far I only have the US price for it, which is \$22.95, but the range can be obtained in the UK from IW Models.

Leading Edge

Apart from their new decal sheet for the Canadair Sabre (See Decal Reviews), the next kit due from this company is the Bomarc 'B' missile. This 1/72nd scale resin kit will be 7.5" tall and will include

markings for both a USAAF and RCAF version. Although not really an aircraft this missile was an atomic anti-aircraft weapon.

Magna Models

Hopefully available by the time you read this will be a 1/72nd scale Short Sturgeon TT.2/TT.3 from this source. Due in mid-1996 will be the Curtiss Seagull/Seamew in the same scale. Both kits will consist of resin main components with vac-formed clear plastic and pewter detail parts.

S-Model

This Polish firm produce vac-formed kits with resin detail parts and in the near future they will be releasing a 1/48th scale PZL P-37B 'Los' and this will be followed by the Chance Vought SBU-1 and PZL W-3



'Sokol' in the same scale. There is no UK source for these kits so if you are interested in them or want to know more about the firm, contact them at:

S-MODEL ul. Szmargdowa 42/23,
20-570 Lublin, Poland.

Mach 2

The latest kit from this limited-run injection moulded kit manufacturer is the Breguet Alize. This 1/72nd scale kit should be about £19.50 and the UK source is H.G.Hannant Ltd.

Merlin

The latest kit from this source is the De Havilland DH.90 Dragonfly in 1/72nd scale. This limited run kit will retail for £14.95.

Model News

Having made an excellent Messerschmitt Bf 109T and N.A A-36A Apache in 1/72nd scale, this company are now releasing a North American Mustang 1/1A in the same scale. The kit is injection moulded plastic and the UK price is £5.99.

Marine Air Products

This American firm produce high quality resin and etched brass update sets for larger scale models. Recently the firm started to produce sets specifically for the Combat Model kits, but the range also includes sets for Airfix 1/24th scale and Revell 1/32nd scale kits. Detail sets due for Combat kits include; F6F-3/3N and F-4E Phantom in 1/24th, the Me410, He 219, Ju 88A-1/4, B-25H/J, Sea Fury, B-17E/F/G, A-6E, SB2U Vindicator, F9F Panther and CH-47C in

1/32nd scale and He 177A-5, Fw 200 and PB4Y-2 Privateer in 1/48th. Cockpit detail sets for Revell kits include the Bf 109F/G, P-38J/L, F4U-1A, Bf 110G Mosquito Mk IV, Fw 190D-9, P-51B, Ju 87B, Curtiss P-40E, Me 262 and RF-4B Phantom in 1/32nd. In 1/24th scale there are sets for the P-51D, Bf 109E, Ju 87B and Fw 190A-4 for the Airfix kits and the SBD-5 Dauntless in 1/32nd for the Matchbox kit. On top of this there will be 1/32nd scale conversions for the Ju 87B to Ju 87G, P-40E to P-40F and Mosquito IV to 30, all for Revell kits. Some of the above sets are already available whilst the remainder will be released in the future. If you want to know more about this range contact MAP directly at:

7111 West Indian School Road, No 126, Phoenix, Arizona 85033, USA.

Marivox

This Swedish company released the excellent injection moulded kit of the FFVS J22 in 1/72nd scale a while ago and their next kit will be the Saab B.17 which should be available in about July.

Verlinden

Having moved back into the aircraft detail area with their recent He 111 upgrade set, the latest release of interest to aviation



modellers is a set of German WWII 1000kg bombs complete with sleds in 1/48th scale. I have little more information on these yet but I would hope that the price will be around £15.00 in the UK.

Model Design Construction

This is a new company which has recently come into existence in the UK. Producing high quality resin kits with metal and etched detail parts, they will concentrate in 1/48th scale aircraft and 1/24th scale British trucks. The first aircraft release is due in the Autumn and it will be the Fairey Swordfish Mk 2/3. As well as producing kits the company intends to bring modellers new tools and materials as and when they come across them. If you want to know more about what MDC are all about then you contact them at:

1, Park Mews, Church Street,
Riddings, Derbyshire DE55 4DD.

MRC

Their full title is Model Rectifier Corporation and they are the Fujimi

importer in the USA but of late they have moved into kit production with a selection of helicopters in 1/35th scale. The next in this series will be the Bell UH-1C and the only price I have so far is in the USA and that is \$29.98

MPM

Due in their limited-run injection moulded kit range before much longer will be the Messerschmitt Me 210, Ryan XF2R Dark Shark, Messerschmitt Bf 109V1 and Curtiss P-40F/L. All will be in 1/72nd scale and they should be about £9.95 each. For more details contact the UK importer, H.G.Hannant Ltd on 01502 517444 for more details.

MPM/HML

The Heinkel He 219 mentioned last month from this source has now been announced in the UK. The kit is resin and is to 1/48th scale. There will be 112 resin, 5 vac-formed, 2 clear, 47 etched brass and 3 metal parts plus a two option decal sheet. The only bad news is the price, which at £74.95 will be well outside of most modellers pocket. Another kit for the collector I fear. For your information I think the 'HML' element of the MPM logo stands for 'Hand-Made Limited Edition. The source for the kit at the above price is H.G.Hannant Ltd.

Nakotine

With many of this Latvian companies kits now boxed under the Encore label (See Previews last month) the next couple of releases from them may well arrive over here before much longer. The Su 27 UB two-seater, Su-30 and Su-30MK are all planned for release in 1/72nd scale.

Project X

This is another of Maintrack Models' products and this series of 1/72nd scale vac-formed project aircraft is well established. The next couple of issues from this source will be the Avro 707, Northrop A-9A, North American YF-93A and the Hunting H.126. The only kit I have a price for so far is the Avro 707 and this will be £7.95

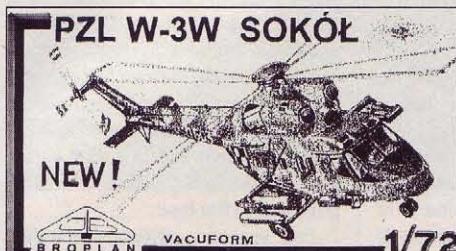
Pavla Models

The long awaited Kyushu Q1W1 'Lorna' in 1/72nd scale from this company should be available by the time you read this and the price has been set at £17.50. Apart from their excellent new Kyushu 'Lorna' the next new kit from this source is the in-line powered Henschel Hs 129A. The kit will be limited-run injection moulded plastic with etched detail parts and decals and the UK price is set at £11.50. The UK importer for the range is H.G.Hannant Ltd.

News Update continued on page 341...

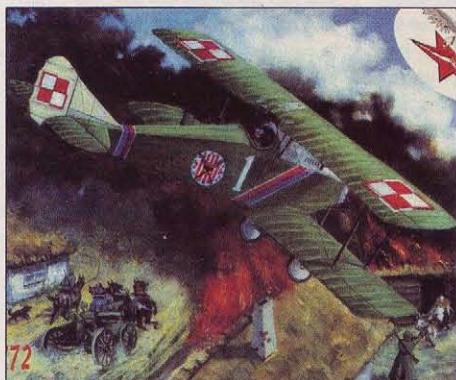
Previews

You will notice this month that some of the previews have an 'Origin' sub-heading. It has become increasingly noticeable that many of you are confused and concerned about the number of re-boxings of other manufacturers' kits which is occurring. In future all kits which are released under another company's label will carry this origin heading and in it will be the original manufacturer of the kit and a country of origin. We hope this helps - Ed.



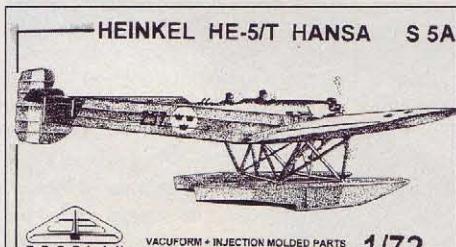
TECHNICAL DATA

Kit: PZL W-3W Sokół
Manufacturer: Broplan
Scale: 1/72nd Price: \$10.00
Type: Vac-formed with Injection Moulded Plastic
Parts: Plastic (Vac); 67, Plastic (Inj); 32, Clear; 8
Decal Options: 1
Manufacturer: Broplan, ul. Pilotów 10G/33, 80-460
Gdańsk, POLAND



TECHNICAL DATA

Kit: Ansaldo A.1 Balilla
Manufacturer: HitKit
Scale: 1/72nd Price: £12.99
Type: Limited-Run Injection Moulded Plastic with Etched Brass
Parts: Plastic; 27, Etched; 9 Decal Options: 18
Distributor: H.G.Hannant Ltd, Trafalgar House, 29-31
Trafalgar Street, Lowestoft, Suffolk, NR32 2AT



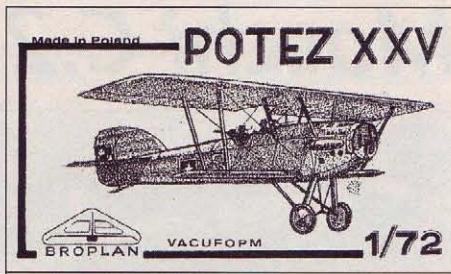
TECHNICAL DATA

Kit: Heinkel He-5/T Hansa S 5A
Manufacturer: Broplan
Scale: 1/72nd Price: \$10.00
Type: Vac-formed & Injection Moulded Plastic
Parts: Plastic (Vac); 21, Plastic (Inj); 26
Decal Options: N/A
Manufacturer: Broplan, ul. Pilotów 10G/33, 80-460
Gdańsk, POLAND



TECHNICAL DATA

Kit: Albatros D.III (Öffag) ser. 53/153
Manufacturer: HitKit
Scale: 1/72nd Price: TBA
Type: Limited-Run Injection Moulded Plastic with Etched Brass
Parts: Plastic; 20, Etched; 25 Decal Options: 10
Distributor: H.G.Hannant Ltd, Trafalgar House, 29-31
Trafalgar Street, Lowestoft, Suffolk, NR32 2AT



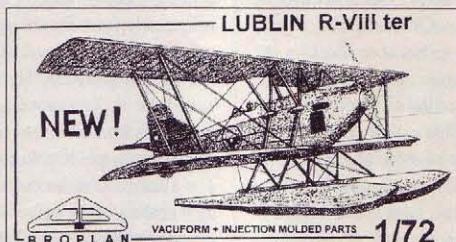
TECHNICAL DATA

Kit: Potez XXV
Manufacturer: Broplan
Scale: 1/72nd Price: \$7.00
Type: Vac-formed Plastic Parts: Plastic; 66
Decal Options: 1
Manufacturer: Broplan, ul. Pilotów 10G/33, 80-460
Gdańsk, POLAND



TECHNICAL DATA

Kit: PWS-26
Manufacturer: Broplan
Scale: 1/48th Price: \$10.00
Type: Vac-formed & Injection Moulded Plastic
Parts: Plastic (Vac); 26, Plastic (Inj); 33
Decal Options: 2
Manufacturer: Broplan, ul. Pilotów 10G/33, 80-460
Gdańsk, POLAND



TECHNICAL DATA

Kit: Lublin R-VIII ter Manufacturer: Broplan
Scale: 1/72nd Price: \$10.00
Type: Vac-formed & Injection Moulded Plastic
Parts: Plastic (Vac); 23, Plastic (Inj); 30
Decal Options: 2
Manufacturer: Broplan, ul. Pilotów 10G/33, 80-460
Gdańsk, POLAND



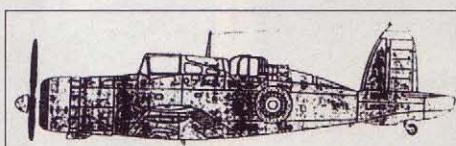
TECHNICAL DATA

Kit: Heinkel He-5/T Hansa (S 5C/5D)
Manufacturer: Broplan
Scale: 1/72nd Price: \$10.00
Type: Vac-formed & Injection Moulded Plastic
Parts: Plastic (Vac); 22, Plastic (Inj); 30
Decal Options: N/A
Manufacturer: Broplan, ul. Pilotów 10G/33, 80-460
Gdańsk, POLAND



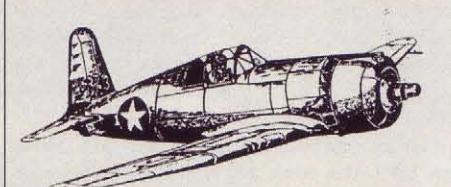
TECHNICAL DATA

Kit: McDD RF-4C Phantom II
Manufacturer: Revell
Scale: 1/32nd Price: £28.50
Type: Injection Moulded Plastic
Parts: Plastic; 133, Clear; 2 Decal Options: 2
Distributor: Revell (GB) c/o Binney & Smith Ltd, Ampthill
Road, Bedford.
Tel: 01234 360201



TECHNICAL DATA

Kit: Blackburn Roc Mk.I Manufacturer: S Model
Scale: 1/72nd Price: TBA
Type: Vac-formed Plastic & Resin
Parts: Plastic; 33, Clear; 2, Resin; 15
Decal Options: N/A
Manufacturer: S Model, ul. Szmaragdowa 42/23, 20-570
Lublin, POLAND



TECHNICAL DATA

Kit: Vultee P-66 Vanguard
Manufacturer: S Model
Scale: 1/48th Price: TBA
Type: Vac-formed Plastic & Resin
Parts: Plastic; 30, Clear; 1, Resin; 21
Decal Options: N/A
Manufacturer: S Model, ul. Szmaragdowa 42/23, 20-570
Lublin, POLAND

Reviews

Macchi C.205 Veltro (ANR Version)



TECHNICAL DATA

Manufacturer: Hasegawa
Scale: 1/48th Price: £17.99

Type: Injection-Moulded Plastic
Parts: Plastic; 73 Clear; 3

Decal Options: 2

Importer: Amerang Ltd, Commerce Way, Lancing, West Sussex BN15 8TE

The Kit

Having already released an Italian Air Force version of the Veltro in 1/48th scale, it was only a matter of time before an ANR operated version came along. The kit itself is the same as the previously released version and that tooling was new. The panel lines are recessed and the kit comes with nice cockpit interior and a two part cockpit canopy.

Construction

This is the easy bit! Hasegawa kits are always sought after and I am sure that kits of the C.202 and C.205 in quarter scale are some of the most difficult to get hold of. There must be a hell of a lot of them hoarded away somewhere as I have seen very few of them on the shelves. The C.205 draws much from the previous C.202 kit and because of this in this version you will have to cut off the moulded wing mounted machine gun barrels and fit the fairings for the cannons. This may sound difficult but it is not and the new barrels fit so well that hopefully you will not see the join as it were.

Having the True Detail cockpit detail set to hand I just could not help but use it. The kit's interior is very good however and with a little careful painting and dry-brushing I am sure that most modellers will be satisfied with it. I have seen things written about the lower fuselage spreader bars but I must admit that I had little trouble with them. Initially I checked the fuselage halves against the wings that I had already constructed and I found that everything fitted together very tightly. You may therefore find that a little has to be removed from these spreader bars before assembly or the fit of wings to fuselage may just be too tight.

The complex shape of the upper

decking insert (Pt No. A7) does little to help fit and this was one of the few areas in which I needed filler. The lower engine cowl insert (Pt No. G10) fitted very well at the front but not so hot at the back so out came the filler again. You cannot confuse which side each of the oil coolers goes (Pt No's. G6/8 & G7/9) as they have different numbers of locating tabs which relate to their position. This is a neat touch by Hasegawa which shows the level of thought that has gone into this product.

Paint up the interior and blades of the propeller before you assemble the unit as the interior is quite visible once everything is together. The last items I added before painting commenced was the radiator body (B7) less the rear flap (B6) and actuator (B10) and the aerial mast.

Once painting and decals were applied and dry the undercarriage was assembled and fitted as well as detail parts such as the canopy, exhaust stakes, radiator flap etc and tailwheel and doors. Don't forget that the canopy on the C.202/205 hinges to starboard a la Bf 109 and as this is supplied as a separate unit it can easily be displayed in this manner.

Accuracy

Going by the information published in the Squadron Signal 'In Action' title on the C.202/205 this model is just a tad short in span (2 scale inches) and bang on in regard to length. The model itself has all the classic Italian lines of the original and I feel that the tiny span deficiency is quite acceptable in this scale and does nothing to detract from the overall 'look' of the completed model.

Colour Options

There are two colour options in this kit. One is in Luftwaffe colours of RLM 74/75 over RLM 76. You should note that the instructions only identify RLM 75 on the instructions and there is no mention of the relevant colour for the one they have as '36'. This colour is RLM 74. On this first option the upper wings are in a solid, splinter pattern of RLM 74/75 (as are the tailplanes) whilst the upper decking of the

fuselage and down each side is a dense mottle of these colours over RLM 76. The propeller is listed as black although it is unlikely that if the type has been resprayed in Luftwaffe markings that the propeller would have remained this colour. It is therefore far more likely that the unit is RLM 70 with the spinner in 2/3rd this colour and 1/3rd white.

The second option in the kit, and the one I went for, is in a more 'Italian' scheme. That is to say that it is Sand over Light Blue with ringlets of Dark Green on the upper surface. The colours used for this machine are Luftwaffe however instead of the usual Italian colours and it is RLM 79 on top with RLM 78 underneath and the upper ringlets are done in RLM 80. I used Aeromaster paint for the upper and lower colours and these were; RLM 79 (9034) and RLM 78 (9033). The upper ringlets were done in Xtracolor RLM 80 (X215) and this is because I find the AeroMaster paint simply too fine to spray free-hand. The effect is that the entire model gets a light coating of the colour and this simply would not work. The Xtracolor on the other hand is far more dense and it is therefore much better for this type of free-hand work. The nice thing about this scheme is that the sides of the lower radiator bath and an area which wraps around each wing and tail leading edge are also in the upper colour markings.

The propeller on this version is black (Revell 8) and the spinner was white (Revell 5). The interior of a C.205 is slightly lighter green than Interior Green and I therefore added a little white to Humbrol 151 to get the desired effect. The instrument panel is black and the seat, control column and rudder pedals are all aluminium (Revell 99). The undercarriage legs are listed as being the same colour as the under surface but every source I checked had them in a silver colour and I therefore opted for this and used Revell 90 for the task. The tyres are Tyre Black

(X505) and the exhaust stakes are Gunmetal (X 506).

Decals

These are up to the standard we all expect from Hasegawa and I had little trouble applying them to the gloss finish I had applied overall to my model. Each image is well printed and nicely in register. There are only small amounts of carrier film and these can be trimmed off prior to application if you desire. A nice selection of stencilling is included and there is even a decal for the black spinner spiral, although I opted to paint mine on free-hand.

Each one of the images was applied onto the model with the aid of Micro Set and then they were settled to the surface with AERO Sol. The only one which silvered was one of the fuselage codes and this was probably my own fault (not enough decal setting solution).

Decal Rating = 10/10

Conclusion

This is a superb kit and one which really does capture the classic lines of the C.205 to perfection. Although I would not say this is a kit for a complete novice I am sure it will be within the grasp of most modellers to get a very nice model from this kit.

As a point of interest about the second colour option in this kit, if you want to see a picture of the real machine in service look at page 563 of Vol 1 Iss 10 October 1995 as this is included in Richard Caruana's article on the type.

Recommendation

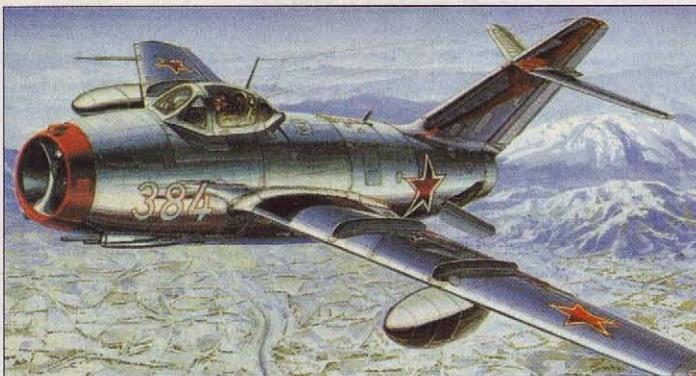
What can I say, "love it, love it, love it!". In the words of fellow reviewer Mitch Thompson, I can recommend this to all, young or old, animal or mineral!

My thanks to Amerang Ltd for the review sample.

Richard A. Franks



MiG-15bis



TECHNICAL DATA

Manufacturer:	Tamiya
Scale:	1/48th
Price:	£15.99
Type:	Injection Moulded Plastic.
Parts:	Plastic: 81, Clear: 5
Decal Options:	4
Importer:	Richard Kohnstam Ltd, 13-15a High Street, Hemel Hempstead, Herts. HP1 3AD
Tel:	01442 61721 Fax: 01442 240647

The Kit

When I first saw this kit at the Toy and Hobby Fair in the early part of 1996 I was amazed by the inclusion of the engine and more than a little impressed with how the model sat quite happily on its undercarriage. The inclusion of an engine and the option to remove the rear fuselage may sound a little 'gimmicky' but the inclusion of a handling trolley for the rear section means that you can display your completed model quite realistically.

The model itself is all new and it is moulded in the standard 'Tamiya Blue/Grey' plastic with nicely recessed panel lines and a superb decal sheet printed by ScaleMaster.

Construction

This really is easy as this kit is a real gem to assemble. We all know how Mitch raved about the P-51B (See Vol 2 Iss 5 Page 266) and this kit is in the same style. The fit of all the parts is flawless and the detail is amazing.

Construction starts with the cockpit interior which is very well detailed with a cockpit tub, ejection seat complete with separate head armour, instrument panel, control column and gunsight. The latter is in clear plastic and there is also a pilot figure included, should you choose to use it. At the rear of the tub is a funny curved rod which is moulded in clear plastic and its function will not become apparent until later. Once the cockpit tub is assembled and painted it can be fitted into the forward fuselage halves. If you are going to use the access ladder (C1) don't forget to open up the holes in the port fuselage half (A12). The intake splitter plate is also fitted at this time and you will be advised to paint and fit the clear lens to the landing light at this time as it is quite inaccessible later. Now comes the neat part. This kit comes complete with a cylindrical

metal weight (as did their Rex kit) and this is inserted under the cockpit floor. The need for that funny clear rod unit becomes apparent now as it stops the weight from falling out at the back. Once this weight is in situ you can cement the lower nose decking in place and add the nose ring and ventral gun blisters.

Assemble the wings less the flaps and don't forget to open up the appropriate hole for the under wing tanks. These tanks can now be assembled, depending on which ones you intend to use and I would advise you to leave them off until painting is complete. Although I painted and made up the nose and main undercarriage units at this point they were not fitted until after painting and decaling was completed.

The engine unit comes next and this is made up after all the parts have been painted and dried. The unit itself is not added to the model at this stage as it will interfere with spray painting.

The rear fuselage was made up as a separate piece at this stage and put to one side. If you intend to use the handling trolley then you will have to close the air brakes as they will foul the framework otherwise (this is a point I learned from bitter experience!).

The model was primed and sprayed at this stage and once all the decals were applied and an overall coat of satin varnish was applied the detail parts such as canopy, undercarriage and drop tanks were added.

Accuracy

Well what do you expect from a Tamiya kit? Yes, you guessed it this kit is perfectly in scale with the information I found in the 'Illustrated Encyclopedia of Aircraft' on the type. The model truly captures the look of the MiG 15 and it sits with just the right amount of nose-up attitude once completed. The only items I can see are missing from the kit are the undercarriage position indicators which are on each wing and on the nose, slightly offset to port and various small antenna that are on the under surface of the forward fuselage and to starboard just aft of the cockpit on the upper decking. All these points can be easily corrected and they do not effect the overall look of the completed model anyway.

Colour Options

There are no fewer than four options in this kit and they are two Chinese, one Russian and one Korean. The Soviet option is the machine depicted on the box too and it is Duraluminium overall with a red nose and a large red lightning bolt on the tail. The North Korean option is just plain metal overall. The Chinese versions are much more colourful. One is metal overall with the nose and the entire rear fuselage and tail is red. The other option was my choice however as it is light grey underneath with a pale green similar to Sky on top which is covered in 'snakes' of dark green.

The colours quoted in the instructions are all Tamiya's own paints but I opted to use others from the Xtracolor, AeroMaster and Revell ranges. My option was therefore AeroMaster Grey Primer underneath with RAF Sky (9114) on top. The 'snake' mottles are done in Dark Green and I opted to use RLM 82 (X211) from the Xtracolor range. The nose and undercarriage bays on a MiG-15 are light blue/grey and this is almost an exact match for the Halfords Grey Primer I had used (and if you believe that you will believe anything!). The oleo legs themselves are Dark Grey and I used Revell Matt 77 for this. The wheel hubs are a special green colour and this is available in the Xtracolor range (X628). The oleo legs of a MiG-15 do not have the polished, moving, leg visible, instead it is covered by a leather gaiter and this is best painted Revell 84 on your model. The cockpit interior is the same colour as the undercarriage bays, as is the interior of the flaps. The instrument panel is a very dark grey colour and this is therefore best painted Revell Matt 9. The seat cushions are leather (Revell 84) and the firing handles are red (Revell 36). The engine unit is painted with a mixture of Oily Steel (X503), Exhaust (X504), Gunmetal (X506) and Natural Steel (X502). The handling trolley and access ladder are quoted as yellow but of all the equipment I have seen in support of Russian types from both the USSR and Warsaw Pact countries, it is always red. I therefore opted for this colour and found Revell Matt 36 to be a very good match.

Once all the painting was complete, the model was sprayed with gloss varnish and the decals were applied. Once this was all dry the model was sprayed overall with satin varnish.

Decals

These are produced for Tamiya by ScaleMaster and their quality is superb. Each image is well printed with glossy carrier film. The carrier film is not much larger than each image and they will therefore cause little trouble to use. I slid each image directly onto the model with the aid of a little Micro set solution and once fixed in position I applied AERO Sol decal solvent to draw the image down onto the model's surface. The decals reacted favourably to these solvents and my only problem occurred with one of the national insignia on the wing which broke during application and then slipped apart when it was drying, result - one wonky decal!

I must say that I cannot imagine that these machines had no stencils as the Polish Lim-2 was covered them, you hardly need the servicing manual, all you have to do is read the airframe! This aside and being certain in the knowledge that if there are stencils they will soon arrive from other sources I cannot fault those in the kit.

Decal Rating = 10/10

Conclusion

Another superb product from Tamiya and one which bodes well for the forthcoming Beaufighter, Ki-46 Dinah and Betty in the same scale.

Recommendation

The ease of assembly, excellent tooling, well thought out part breakdown, good instructions and very good decals all make for the ultimate in today's modelling products.

It has already been said but this kit can be recommended to all and for £15.99 this is how a modern kit should be.

My thanks to Richard Kohnstam Ltd for the review sample.

Richard A. Franks



Douglas SBD-5 Dauntless



TECHNICAL DATA

Manufacturer:	Hasegawa
Scale:	1/72nd
Price:	£9.99
Parts:	Plastic 50, Clear 5
Decals Options:	2
Distributor:	Amerang Ltd, Commerce Way, Lansing, West Sussex BN15 8TE
Tel:	01903 765496

The Kit

Well presented in a compact box, displaying good graphics of the SDB in flight as well as a smaller colour picture of the constructed kit on the box side. Overall the quality of the injection mouldings is very good as one would expect from Hasegawa, along with clear assembly instructions printed in black and white in one simple pamphlet.

Construction

This begins with the cockpit's assembly from eight parts. The detail is very basic, there being no controls moulded into the interior fuselage sides, no seat straps and the instrument panel detail provided by the application of four decals, which in 1/72nd scale is rather fiddly! The simplest approach is to paint the assembly and fuselage interior green (Humbrol Acrylic Green 5078) then carefully cut out the decals and stick to the panel, then touch up as required, control stick, pilot's headrest etc.

Next lightly glue the cockpit assembly onto one fuselage half then glue the other half to it, the fit is very good. With careful application of a liquid adhesive and pegging the halves together to ensure a firm fit there should be no need for any filling along the joins. The main wing assembly is

straightforward but remember to drill out a small hole on each wing underside to fit the Yagi radar antennas later. The wing assembly can then be mounted onto the fuselage, it is best to glue into position one side first, allow to set, then glue other side. Again the fit is very good, requiring no filler.

It is worth pointing out here that although the quality of the mouldings is very good, detailing panel lines and inspection hatches, Hasegawa have not been able to achieve total realism in regards to Jack Northrop's pierced dive brakes and flaps, which were located above and below the trailing edge of the outer wings and below the trailing edge of the centre section. Doubtless there will be keen model makers who attempt to drill out the holes (in excess of 200 !)

The engine assembly is straight forward along with the stabilisers, it is beginning to look like an aeroplane now. I then decided to change the order of construction, the instructions outline 'various bits next i.e. landing gear, radar and ordnance'. As I was intending to air brush this model with Humbrol Acrylics, I wanted to paint it first before fitting those small components which are so easily knocked off. Therefore it is necessary to fit the cockpit canopy first, mask this off and then spray the model, it was at this point I discovered Hasegawa's first major cockpit.

The cockpit canopy comes in three sections, once assembled there is full 'green house' cover for the pilot and gunner/observer. This raises two questions for Hasegawa, firstly how is one expected to fit the full canopy if, as earlier instructed one has fitted the twin rearward facing 7.7mm machine guns? Secondly on operations most crews operated with the canopy drawn back to maximise the air flow over them in the hot Pacific climate. Does Hasegawa seriously expect its model makers to take a hacksaw to the only canopy in the kit?

Anyway enough of that, on with the build.

I gave the airframe a prime coat of Halford's grey primer and decided on the second colour option VC-40 US Navy operating from the USS Lexington.

The wing and fuselage underside is sprayed light grey (Humbrol Acrylic 5064), not forgetting to spray the undercarriage gear, radar antennas, bomb racking and landing hook at the same time whilst these parts are on the sprues for easy handling. The fuselage and wing tops are sprayed with a single colour (a half and half mixture of Humbrol Neutral Grey 5027 and Navy Blue 5077), remember to keep a little back to touch up the canopy framework later.

Whilst the airframe is drying (a matter of minutes with these Acrylics) a matt black can be applied to the Propeller and wheels (unfortunately not weighted). Then carefully cut off all remaining parts for the underside assembly, touching up with Light Grey were necessary, the ordnance, if fitted needs to be painted Olive Drab. Here is a second point for Hasegawa, the SBD-5 included wet points on the wings to carry an additional bomb load or 58 gal drop tanks, this kit comes with only the bombs.

Once the remaining parts have been fitted to the underside, undercarriage etc. the whole

model can be given a gloss varnish before application of the decals.

Decals

The decal quality is very good, with both versions operating from the USS Lexington. Application can be enhanced with the use of MicroSol, but be careful of over-use. The decals are thin which means they settle well onto the aircraft surface displaying panel lines etc., but can tear. A point worth making is, make sure the Stars are the right way up! That is with one point at the top (I speak from experience on this one!). Once applied give the model a final generous coat of gloss varnish, remove canopy masking, touch up framework and hey presto it's finished.

Decal rating 8/10

Conclusion

Apart from the error of a single canopy, this is a nice little kit and I thoroughly enjoyed making it. It goes together well with no filling and once complete with a gloss coat it looks the part, one can hope that some entrepreneur may even try and supply some photo etched parts to give cockpit detail and even perforated dive brakes and flaps.

Recommendation

I can recommend this kit to all.

Steve Ellen



Bell47 H-13 H "Gunship"

TECHNICAL DATA

Manufacturer:	Revell
Scale:	1/35th
Price:	£8.95
Type:	Injection Moulded
Kit No:	04402
Parts:	72 plastic and 3 clear
Decal Options:	1
Distributor:	Revell (GB) Ltd, c/o Binney & Smith Ltd, Ampthill Road, Bedford Tel: 01234 360201

The Kit

This is a rework of the previous "M.A.S.H." kit from Revell and, for some reason, it's only about two thirds of the price of its predecessor. The sprues are exactly the same, including the stretcher-carrier



assemblies, but with two .30 calibre machine guns and six rockets in their tube launchers (three each side) added to the second sprue.

Construction

The instructions are of Revell's usual standard, breaking construction down into 18 easy stages. First is the tail-boom framework,

which is only semi-cylindrical with the flat face on the inside. This gives a reasonable representation of the real thing, but it is far too thick to be to scale. There is room for the enthusiast to add the control lines to the tail-rotor, but these parts are not included. Following this is the undercarriage, which is of the 'curved' variety and includes the ground handling wheels.

The engine is next, is nicely detailed and builds into a suitably 'complex' looking piece of equipment straight from the box, but there is still scope for super detailing with extra small pipes and wires which can be added. The cockpit goes together well with a good instrument panel and all the controls. A pilot is included with poseable arms but I chose to leave him out under the very clear moulded bubble canopy.

The .30 calibre machine guns are mounted, one each side, on platforms on top of the undercarriage legs. These include the ammo boxes and even the compressed air bottles used to charge the guns. The rocket racks are moulded as one piece, with an extra part as the rear bracket mounted below the undercarriage legs, under the machine guns.

The main rotor is a faithful copy of the original with good detail on both the head, including Bell's characteristic stabiliser bars, and the rotor shaft.

The majority of the work involved in building this kit is trimming the excess plastic along the seam from the mould, which is evident on a lot of the parts. I also had to rub down the end plates of the tail stabiliser to get a flat surface and I found the joins of the oil

filter, fuel tanks and engine parts needed the same treatment.

Colour Options

I found it easier to paint various sub-assemblies before fitting as recommended in the instructions, due to the fact that nothing is 'hidden' on a Bell 47! Revell do not give the Federal Standard numbers in the instructions, only their own paints. I used FS 14087 (gloss) all over as a typical Korea/Vietnam colour finish which made decal application easier, followed by a coat of matt varnish.

Decals

The decal sheet only provides subjects for the one version to be built. The sheet contains 28 subjects comprising titles, insignia and, a must

on aircraft of this scale, the stencilling and warning signs on the tail and the fuel tanks.

Even applied to gloss paint the carrier film did not stick to the surface very well and could be seen when dry. I found that by soaking the decal from the backing sheet, drying it and applying it to a coat of wet gloss varnish, the carrier film was masked. This also helped to stick the small insignia to the curve of the top of the fuel tanks.

Accuracy

The overall shape of the model seems to capture the lines of the original aircraft very well. The dimensions of the Bell 47 varied a little during production and the length, height and rotor diameter of the kit remain within the scale limits.

Conclusion

The instructions and the fit of parts are generally good and construction is simple. A nice replica can be built straight from the box with a bit of effort on the joint lines and seams. My one real disappointment in the appearance of the finished model is the thickness of the tail boom framework.

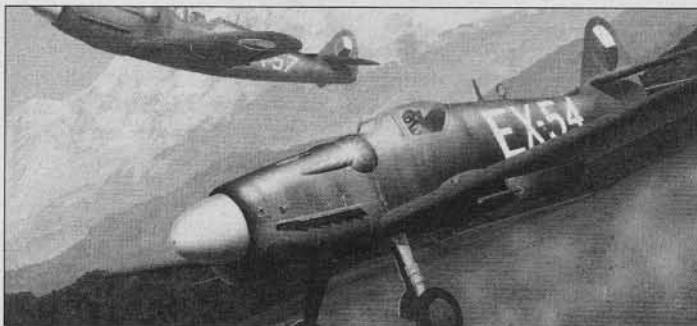
Recommendation

A must for the Bell 47 enthusiast or those of the Korea/Vietnam wars, but to build a truly accurate model will take a lot of time and effort from even an experienced modeller.

Thanks to Revell (GB) for the review sample.

Fred Tooke

Avia S-199 'Mule'



TECHNICAL DATA

Manufacturer:	Hobbycraft
Scale:	1/48th
Price:	£10.99
Type:	Injection Moulded Plastic.
Parts:	Plastic; 57, Clear; 3
Decal Options:	2
Importer:	Pocketbond Ltd, PO Box 80, Welwyn, Herts. AL6 0ND
Tel:	01438 798593 Fax: 01438 798616

The Kit

This is the second issue of the basic S-199 kit as it was previously available in Israeli markings. The kit itself is a relatively new tooling and it features recessed panel lines, a two-part cockpit canopy and an optional starting handle.

Construction

This is quite easy as the kit fits nicely and you will have little need for any filler. Cockpit interior detail is quite nice although the position of part numbers F33/34 is quite vague in the instructions. When assembling the wings ensure you open up the holes for the underwing cannon gondolas and the upper wing bulges. If you want to fit the starting handle you will have to drill a hole in the fuselage side although this is well illustrated in the instructions. Most Avias in Czech service seem to have the small scoop under the fuselage and this is supplied (D16) although if you go for a different option you may require the larger radiator bath (D4) and this is also included.

The undercarriage is good and the correct angle of each oleo is assured thanks to a neat stepped locating lug on the end of each unit. This makes for an easy assembly and a very strong unit once dry. The drop tank is good and all you may wish to add is the retaining strap from either tape or decal strip. The fit of the tailwheel yoke (F24) was very sloppy and you will find that you have to use quite a bit of cement to get it to hold its position correctly. The final items I added before painting were the aerial mast and DF loop and the ventral cannon gondolas.

Once painting and decaling was completed the detail parts such as undercarriage, drop tank, propeller, tail wheel and canopy were added.

Accuracy

The S-199 is a difficult type to track down measurements on and as it has the same span as a Bf 109G-6 then I can say that this kit is spot on with regard to that measurement. The length however I was unable to ascertain in my limited time period and the kit is therefore 29' 10" long, which may or may not be accurate! The overall look of the model is good and the 'sit' is certainly very much that of a Bf 109 derivative.

Colour Options

There are options for no fewer than four machines on the decal sheet although each of them uses the same overall colour scheme.

This scheme is a little boring as it is RLM 71 overall. I was unsure of the interior colours so I opted for a Ha 1112 style of RLM 66 interior except the floor, which is RLM 02, and RLM 02 for the undercarriage bays, oleos and the interior of the undercarriage doors.

The colours I used were RLM 71 (9024) from AeroMaster overall and RLM 66 (X203) and RLM 02 (X409) from Xtracolour. The Spinner is white (Revell 05) and the propeller blades are RLM 70 (X204). The tyres are Tyre Black (X505) and the exhaust stakes are Gunmetal (X506).

Once all the overall colours were applied the model was given a coat of Revell gloss varnish and once the decals were on the model was toned down with a coat of matt varnish from the same company.

Decals

Now this is one area where Hobbycraft have not got a good name. In the past their decals have been worse than useless, but in the recent kits these have improved and I am glad to say that the Avia is one to benefit from these improvements. Initially I inspected the decals and found them to be of reasonable quality, all in register with glossy carrier film. The model had been primed with gloss varnish before decaling commenced and so I set about applying the decals of my chosen machine.

It was as I applied the decals using AERO Set and Sol solutions that I realised all was not well. No matter how I tried these images were going to silver. I found some so bad that I removed them and started again, still

without success. Having to grin and bear it I was left with no option but to leave them as they were and hope. My prayers were not answered however and about 80% of the images silvered to various degrees. This meant I had to paint all the carrier film out by hand and this did mean that I could not help but have big areas of colour which did not match that of the overall scheme (a second application of paint never matches the first - Modellers Rule No 10!).

Decal Rating = 5/10

Conclusion

This is a sound kit which builds well and looks nice. I must say that the overall green scheme of this type is a bit boring, but we cannot change history so we will have to live with it. The decals are the real let-down in this kit and as there are no others on the market to date it does mean that you will have to either overcome them or leave the kit in the pending pile for a while.

Recommendation

The comments about the decals aside I feel that this is a good kit and who would have thought that we would have a whole series of S-199's and Ha 1112's in quarter scale by now.

The price is right and the construction is straight forward so I can recommend this kit to all. Beware the decals though!

My thanks to Pocketbond Ltd for the review sample.

Richard A. Frankel



Fokker 100



TECHNICAL DATA

Manufacturer:	Revell
Scale:	1/144
Price:	£8.95
Type:	Injection moulded plastic
Parts:	43 plastic, 3 clear
Decal Options:	2
Distributor:	Revell (GB), c/o Binney & Smith, Ampthill Rd, Bedford
Tel:	01234 360201

The Kit

I expected this model to be larger than it is, the 100 always looks larger when seen in the metal. Moulded in white plastic, the detail on the fuselage halves is excellent with both raised and engraved panel lines. There are no fuselage windows provided, just pre-cut holes.

Construction

With most of the detail already being on the parts construction couldn't be simpler, or appeared to be. Weight must be added to stop the nose-up stance after completion. The tailplane

is moulded in one piece so the trailing edge profile is nicely proportioned. The aerials are moulded to one side of the fuselage which caused a problem when the seam line had to be sanded down. There is a slight shrinkage in the left hand fuselage but not too noticeable with a bit of careful sanding down. However do not over sand this area lest it affects the fuselage cross section profile. There are four small sinkholes in the top of the fuselage that have to be filled, unfortunately this erased some of the engraved detail which then had to be rescribed. There were also sinkholes in the engine pylons. The biggest problem was the wing root to fuselage. A large step of 1.5mm at the leading edge was very conspicuous. The wing shape appeared correct so filler was added to the fuselage root, again this removed some of the excellent detailing. There were no locating

pins on the engine halves which meant that extra care had to be taken to get a true cross section profile.

Colour Options

There are two options in this kit and they are as follow:

KLM - basic well known livery with light blue on top, grey undersides and wings with silver leading edges and a white tail. The grey quoted has to be mixed from two of Revell's colours and the blue is always a question of debate amongst Airliner modellers;

Swissair - white fuselage, grey underside and wings with silver leading edges and a bright red tail. The underside of engines should be dark brown.

Decals

KLM - basic cheat line in blue and white, markings for PH-KLE and tail emblem. The decals went on easily and virtually no silvering was encountered. The biggest problem is that the two fairings moulded on the fin are right in the middle of the KLM logo and no gap in the decal is included.

Swissair - basic cheat line in brown and black, white cross for tail, marking for HB-IVG. A good selection of door and walkway markings is also provided.

Decal Rating = 8/10

Accuracy

With a wingspan of 19.5cm and a length of 24.6cm this works out to an accurate figure of 1/144 scale, the size of the real aircraft quoted as 28.08m span and 35.31m length. Figures were taken from a Fokker press release sheet. The aircraft looks correct and sits at a nice flat angle on all the wheels.

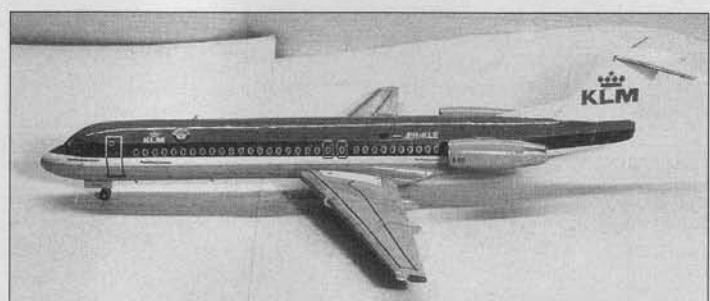
Conclusions

A lot of thought has gone into this kit, the detail is excellent and little extras like clear wing lights are very welcome. Unfortunately this is spoilt by badly fitting parts.

Recommendation

Due to the problems of fit I can only recommend this to the dedicated and experienced airliner modeller.

Paul Gold



Mil Mi-6



TECHNICAL DATA

Manufacturer:	Air Craft Models
Scale:	1/144
Price:	£7.50
Kit No:	421
Type:	Vacform with white metal
Parts:	one large and one small 1mm vacformed sheet, 20 white metal, 1 resin, 4 plastic rods, 1 transparency sheet.
Decal Options:	N/A
Distributor:	AirCraft Models, Stables House, High St, Swineshead, Bedford, MK44 2AA

The Kit

There is a lack of helicopter kits in this scale, those produced being mainly modern attack types. The Mil Mi-6, Nato codename 'Hook'

was designed and first flown in the 1950s and was one of the largest helicopters of its day. Over 800 were produced including export versions and it has been used as both military and civilian transport. Originally offered as part of a double pack with the Mil Mi-26 both kits are now available as single items. The surface detail of the parts includes both raised and engraved detail. The white metal parts are very clean with little or no flash to be cleaned up. The instructions are comprehensive, they run to three pages, with plan views in 1/144th scale and smaller detail drawings, the accompanying text gives basic instruction on vac-form construction and also specific instructions for building this kit. The kit looks difficult to build and the text does not really make sense until you are actually building the kit and looking at parts. The only criticism of the instructions are that a detailed listing of what the parts actually are would have been useful, not having built many

helicopters meant that I didn't know what parts were being referred to and it involved a lot of working out.

Construction

Due to the complex curves of the upper decking and the positioning of the engine intakes/exhausts the first parts needed are the exhausts. The fuselage halves were next and as well as opening up the exhaust ports there were 32 windows to do, not including the cockpit. I actually cut the whole of the cockpit opening as one due to the thin dividers and used microstrip to replace them later. A basic cockpit is provided with a floor and two bulkheads, no interior detail is shown but not a lot would be visible when assembled anyway. One important point here, the model is so finely balanced when complete it would be a good idea to put weight behind the cockpit back wall, you cannot put it in the nose as this is glazed, the instructions make no mention of weighting the nose but the slightest breeze puts it on its tail. Both fuselage halves fitted together well with no difference in length. A step needs to be cut from the rear of the engine block and the nose cone removed, these areas are marked but not very clearly and I found the only way to get both sides the same was to assemble them first. The double curve of the engine top decking is provided as a separate piece and took lots of trial fittings and trimmings to get in place. The single resin part, is then fitted after drilling out the intake holes. Very little filler was needed between the resin and formed parts. The small 'wings' provided were not always fitted, nor were the fuel tanks but they do break up the 'slab-sided' look of the model so I decided to use them. They are formed from two parts each and mating points are marked on the fuselage side. The moveable tailplane is provided as a single piece and the under surface has to be shaped to aerofoil section, there is no way two parts could have been thinned down to a suitable trailing edge on this small scale. With the main body complete it's time to start the rotor assemblies. The tail rotor is made up of 7 white metal parts and involves drilling 6 holes with a 1.5mm bit, the holes are already marked, although one was blocked on the

review sample. The main rotor is made up of 7 white metal parts and five plastic blades, six are provided with the kit, you will probably need the spare! The rotors are single sided and again have to be added to aerofoil section, a piece 5mm long has to be removed and two 0.55mm holes drilled into the blade to accept the pins of the rotor arms. Even though the plastic is 1mm thick this was not as easy as it sounds. The five rotor arms have a pin and hole on each side to connect them to each other, the rotor shaft then passes through the middle swashplate. Links from the swashplate to the arms then have to be made from stretched sprue or similar. A hole needs to be drilled in the fuselage roof at an angle of 5 degrees to accept the plastic tube provided in which the main rotor sits, this has to be done very carefully to avoid cracking the fuselage halves apart. The long rotor blades have considerable droop when at rest but this is shown on the instruction sheet, so is the position of the undercarriage at rest and in flight. Six bulged cockpit windows are provided, three are used so you have a second chance, but it was not clear whether to fit them from outside or inside, I chose to fit them outside and they appear to be okay. Two small fins need to be cut from the thin sheet provided and mounted above the rear cockpit

windows. The fuel tanks on the sides are braced and rod is provided for this and they are shown clearly in the instructions. The undercarriage is made up of one V and one straight strut either side and they must be trimmed depending on whether in-flight or ground positioning is needed. Further detailing options are included on the instructions.

Colour Options

Details are provided for three Russian and one Egyptian colour scheme and with photographs of this machine being few and far between they are probably best followed. The Egyptian machine is Mid Khaki overall including rotor blades. The Russian machines are either Mid Grey overall, Mid Olive overall or camouflaged in Dark Green, purple and olive. The last scheme is shown on one side view only and is quoted as being approximate. Therefore I decided to stick to Mid Grey. Early main rotor arms were Black with dull black leading edges. Tail rotors were early, black with yellow tips and late, grey with yellow or red tips. The inner wings top and bottom were dull black. A list of further reading is provided and these will probably show more schemes but due to deadlines I was unable to look for them. No

decals are provided but with only two stars and a few numbers they should be easy to find in the spares box, if you are building this advanced a kit you will probably have them. One alternative would be to paint it in the colours of Aeroflot as an unusual addition to airliner/civil collection.

Accuracy

Somebody at Air Craft Models has been doing their homework. The model looks correct, the rotor diameter is exact, the fuselage is 1mm (14.4cm) too thin and 3mm (43.2cm) too long, but as this is a vacform kit that may be due to my sanding rather than incorrect scale. Measurements were taken from published figures in Janes.

Conclusions

An accurate representation of an unusual subject. Plenty of options for detailing but you don't have to do all of them to turn out a nice model. The instructions are comprehensive but you will need additional reference material and a basic understanding of helicopters and component names.

Recommendation

A welcome addition to any 1/144 or helicopter collection but definitely not for a novice builder, if you like a challenge this kit will provide it.

Paul Gold



F/A-18C Hornet with Eagle Nose



TECHNICAL DATA

Manufacturer:	Revell
Scale:	1/72nd
Price:	£8.95
Type:	Injection Moulded Plastic

Importer: Revell (GB) Ltd, Binney & Smith Ltd, Ampthill Road, Bedford

The Kit

This is an older tooling of the F/A-18 Hornet, rather than a new kit, specifically released with a new range of decals. Designed for construction as a single seat display aircraft, it still retains the 2 seat option and enough weapons to create a considerable bomb crater (plenty of goodies for the spares box). It also comes with the afterburner cans in the open or closed position - an option which I like on a kit.

Construction

This is not a new tooling and, yes, it does show. The raised panel detail is looking a bit old in places and some of the detail is, shall

we say, vague.

The kit follows the normal construction technique for F/A-18 Hornets in 1/72nd scale - forward fuselage section with 1 or 2 seat option then inserted between the leading edge extensions (LEX) coming from the main fuselage/engine bays.

The cockpit tub is designed as the 2 seat variant and you simply glue a cover over the rear seat for the single seat option. Now this cockpit is basic. The one-piece ejector seat is very simple and the "instrument" panels have a line of large circles engraved upon them (glass cockpit and fly-by wire, I think not). You may be happy with this but it does look like the whole cockpit is made up of dials the size of dinner plates (which is OK if you are a short-sighted pilot).

I airbrushed the interior with Tamiya XF-1 Flat Black to conveniently obscure the non-detail. The seat I painted flat black and picked out the padding with Tamiya XF-24 Dark Grey.

The completed tub was glued into place along with the forward undercarriage wheel-well and the two forward fuselage halves joined together. One problem was the daylight that filtered up into the cockpit from the edges of the wheel-well. It would be wise to use some gap-filling glue or PVA glue around the edges to "seal" the wheelwell properly.

The large hole created by the 2 seat option is covered with a fuselage piece (Pt No.12), the front instrument panel being glued to this before finally sticking it all together (Pt No 15). This actually works quite well and means the minimum of fuss or filler when selecting between 1 and 2 seat variants. You can chop this up to select an open canopy option but, with the level of detail inside, you probably wouldn't.

Although it's in the instructions, I did refrain from putting on the canopy at this stage. The canopy was a bit of a let down. There were some bubbles and imperfections present, as well as a few scratches picked up from roaming around inside the parts bag (a separate bag for canopies - is this too much to ask?).

Now the instructions say that you should stick the front section to the lower main fuselage, then stick the top half into position. This looked slightly risky to me as you would have to try and secure 3 significant fuselage parts at the same time with 2 pairs of hands (are you busy, dear ?....).

So, I stuck the top and bottom halves together and, when set, prised open the LEX wing areas to insert the forward section. You can do this with no problems - except, remember to paint the forward part of the LEX wing the same colour as the cockpit interior otherwise when it all slots together you get 2 nice grey triangles inside the cockpit.

It's at this stage that you begin to encounter the "fit of the parts" issue. There is a significant step up between the main fuselage and the forward section which will require quite a bit of filler. The top half of the main fuselage is wider than the bottom half. But this isn't really a problem is it, as surely there's nothing more relaxing than taking some wet n'dry to a kit whilst listening to good music?

I then skipped parts 8 to 14 in the instructions, electing to put the wings on before worrying about undercarriage and stores.

The main wing parts fit onto stubs which form the underside of the wing. You can then add the various bumps and blisters to the underside. The twin tailplanes, which are set at an angle, located into the fuselage very well, forming the correct angle with no need to jiggle them about.

It's then just a case of adding various intake parts before setting about masking the cockpit area and priming with Halfords Acrylic Primer.

Once primed and sprayed, I added the

undercarriage and various antennae. The detail for the undercarriage and inside the undercarriage bays is good. Lots of ribbing, assembly spars and plumbing - good stuff. It all fits together with the minimum of bother and doesn't wobble about. The undercarriage doors are moulded as a one piece unit. This is great if you want the gear up, but will mean cutting and chopping if you want the gear down.

Colour Options

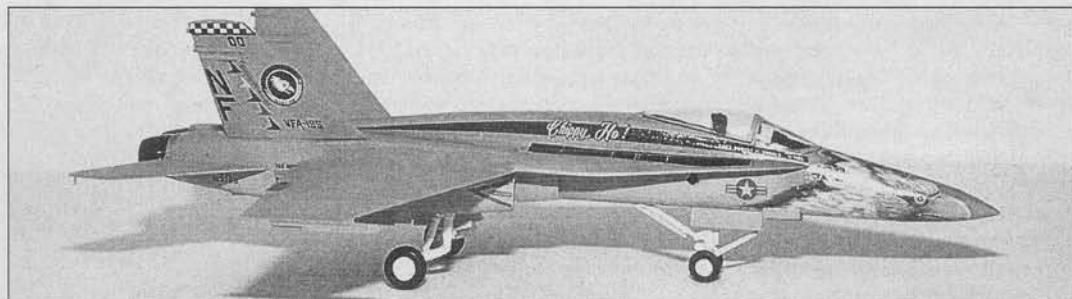
Like most F/A 18 Hornets there is an abundance of grey that can be used.

The undercarriage and wheel-wells were painted with Tamiya XF-2 (Flat White) and then masked off for the exterior colours.

I used 75% XF-19 (Sky Grey) with 25% XF-2 (Flat White) for the Light Ghost Grey and 75% XF-19 (Sky Grey) with 25% XF-53 (Neutral Grey) for the Dark Ghost Grey upper surfaces, airbrushed to give a gentle, feathered demarcation to the two greys.

Decals

This kit comes with one "special" nose-art option. It represents a VFA 195 "Dambusters" Hornet (coded 400 - BuNo.163758) from the USS. Independence with a special Eagle colour scheme used in



the summer of 1995 for public displays.

There is an awful lot of carrier film around these decals and they are very, very glossy. Still, they didn't look too bad so I gave it my best shot. Now I can only say that the decal adhesive used must be a new form of superglue because I have never encountered decals that stick so stubbornly. If they came into contact with the kit, my fingers or anything else they stuck to it with the ferocity of a crazed limpet that does not want to go anywhere ever again.

This made placing them rather difficult.

In the end I took to cutting them into small, manageable pieces and re-constructing them on the kit. It certainly is an amazing colour scheme if you persevere.

Decal Rating 6/10

Conclusion

Well it certainly is different than the usual grey, very grey, or extremely grey Hornet options.

This kit has many good points. The wings and tail fit well. The undercarriage areas are good. It has some awkward bits but this could be an excuse to get to grips with interior detailing and refining your techniques with filler.

I would have liked a choice of decal schemes with this kit, such as the excellent D-Day invasion striped version that was on the display circuit in 1994 or even a straight forward U.S. Navy grey scheme.

Some less experienced modellers may find these decals a bit of a handful. They appeared immune from MicroSet/MicroSol

and caused a few problems whilst positioning.

Overall though, it is no more difficult than the other Hornet kits available and you do end up with loads of goodies for the spares box when you have finished.

Recommendation

This would probably be a good kit for someone who wants something a bit different and will stretch their skills a little bit.

It offers plenty to occupy the competent beginner as well as the experienced builder. I was quite pleased by the end result and do believe it was worth the effort.

My thanks to Revell (GB) for the review sample.

Steve Benstead

Sikorsky HH-53C



TECHNICAL DATA

Manufacturer:	Revell
Scale:	1/144
Price:	£5.75
Type:	Injection moulded plastic
Parts:	Plastic 77 (1 unused), Clear 10 (1 unused)
Decal Options:	2
Distributor:	Revell (GB), C/O Binney & Smith, Ampthill Rd, Bedford
Tel:	01234 360201

The Kit

Moulded in light brown plastic, there are two large and two smaller sprues. The two smaller sprues are the parts exclusively for the HH-53C. They contain armament, ferry tanks, intake filters and a few smaller parts.

Construction

The interior is made up of 7 parts, the cabin/cockpit floor, bulkhead, two pilots seats, control sticks and the instrument panel with raised detail. This makes up into a nicely detailed area for such a small scale. The two rear doors can be positioned opened or closed, the ramp door has a machine gun mounted on it but the large ammo box is missing, this is larger than the gun so should be added from plastic sheet. The rotor shaft

(part 16) does not resemble the instruction drawing and has a ridge missing which holds it into the fuselage half, this means that it must be glued into position and therefore the rotor will not spin. All parts except the main rotor shaft fit firmly and I did not have to use any filler on any joins, just fine grade sanding. The panel lines are a mix of engraved/raised and rivets. Although I think the rivets are overscale they do not stand out too much when painted.

Colour options

Details are provided for two USAF machines from different eras, the first is in three colour Southeast Asia scheme of FS 34079/34102 and 30219 with FS36622 undersides. The second is in European One Lizard scheme of FS34092, 34102 and 36118. This is the first time I have found FS numbers on a Revell kit in this scale, a very welcome addition. That said, the Revell paints available do not match the FS numbers and mixing instructions are included under the paint list.

Decals

There are two options on the decal sheet, low-vis and normal. All the decals had lots of prominent carrier film and proved to be the most time consuming part of the kit. They had no adverse reaction to various Sol/Set products but none actually eliminated all the silverying, despite repeated applications. The decals are correct in size and placement and no colour showed through but they are of

poor quality.

Decal Rating 4/10

Accuracy

Taking published sizes from an old copy of Janes and a calculator the scale works out at 1:147 for the fuselage and 1:145 for the main rotor. These are within acceptable limits for this small scale. The only part that does not look correct is the length of the tail boom from the ventral fins to the tail, it appears too short and even on the painting instructions the boom looks longer but these are not to

scale with the model.

Conclusions

A nice addition to a 1/144 scale collection but some detailing is needed to supplement that already provided. It is all a bit spoilt by the poor decals, nice to see some FS numbers on Revell instructions though.

Recommendation

Recommended for all skill levels.

Paul Gold



Sikorsky CH-53G

The Kit

Moulded in dark green plastic on two large sprues, the kit is basically the HH-53C without armament or fuel tanks.

Construction

This is basically the same as the HH-53C

including the fault in part 16.

Colour options

Details are provided for the MHTFR35 German Army machine in 1987 anniversary colours. The main body is NATO Olive, no FS reference is given. All other colours are from the decal sheet. A



TECHNICAL DATA

Manufacturer:	Revell
Scale:	1/144
Price:	£5.75
Type:	Injection moulded plastic
Parts:	Plastic 58, Clear 10.
Decal Options:	1
Distributor:	Revell (GB), c/o Binney & Smith, Ampthill Road, Bedford.
Tel:	01234 360201

standard marked machine could be made by

omitting some of the decals.

Decals

Approximately half of the model is covered by the decals. All the decals had lots of prominent carrier film and proved to be the most time consuming part of this model. They had no adverse reaction to various Sol/Set products. Micro Sol/Set eliminated all the silvering although because of the number of decals it took 5 hours to put them all on. A good selection of stencil markings are included. The decals are too large in size and placement is a problem as they are shown correct size on the instruction sheet. The yellow stencils and rotor markings cannot be used as the base colour (olive or black) make them disappear. I painted these on by hand.

Also the instruction sheet shows white bands top and bottom in two places on each main rotor but only supply 12 on the sheet, again these were hand painted.

Decal Rating = 6/10

Accuracy

As for the HH-53C model.

Paul Gold



Supermarine Spitfire Mk XIVc

TECHNICAL DATA

Manufacturer:	Academy
Scale:	1/48th
Price:	£13.49
Parts:	Plastic; 85; Clear; 5
Decal Options:	1
Distributor:	Toyway, Unit 20, Jubilee Trade Centre, Jubilee Road, Letchworth, Herts

The Kit

No one can honestly say that the good looks of a Griffon powered Spit don't stir something in ones heart. I even saw a committed Phantom builder go all strange over this kit at the last club meeting! Anyway, what a kit, nicely presented in a stout box with the now usual impressive Academy artwork. This kit is moulded in light grey plastic and is of a very high standard with excellent interior and panel line details. The clear canopy parts are of excellent quality and come as a separate three piece set to be displayed open or closed. The instruction sheet is a little on the unexciting side, but I think we can all live with that.

Construction

This was another of what I call a "Saturday afternoon kit", meaning that you can progress rapidly with this model and achieve significant results in a day's "Spodelling". As in most kits construction begins with the cockpit interior with the pilot's seat assembly of framework and bulkhead and seat. After painting the seat cockpit green (Humbrol acrylic 5078), the seat harness can be included by way of the decal sheet. As this looks truly naff I resorted to my good old Reheat WWII RAF brass etched harness sets to provide a suitable replacement.

The instrument panel and rudder bars/control column all have excellent detail and once painted up and dry brushed with a little aluminium it really looks convincing. There is also an addition to the cockpit which is all too often missed out by other kit manufacturers. The half bulkhead that is just in front of the instrument panel is included

and makes a very busy cockpit indeed.

The rocker cover blisters that are so characteristic of the Griffon Spitfires are separate from the fuselage and need careful positioning before gluing. The manifolds should go on at this point, but for ease of painting I left them off until the last assemblies of the finished model. The same goes for the five bladed propeller. The tailplanes are unusually made in two halves which is a bit of a bind, but the fit is perfect so no cries of anguish today!

The undercarriage has the very welcome addition of weighted tyres in solid mouldings with separate outer hub inserts. These improve the 'sit' of the model no end.

The wings have the extra detail of open gun bays with exposed canon breeches but you will have to do some extra work to detail the wing interiors as these are non-existent which is a bit disappointing. No problems were found in putting the wings together though one of the wing tip joints needed a little filling where it joins the main wing section. The wings join the fuselage very well but not perfectly. This is no disaster because again, very little filler is needed and the Spitfire wing joint is a difficult one to get a good fit with. The large radiator tubes have very good detail inside and have the added detail of open or closed radiator shutters, "Rad shutters auto!". I've always wanted to have an excuse to say that! The wing tips are separate and the kit comes complete with wing tips for both the C and E variants.

Colour Options & Decals

Early on in the first inspection of this kit it became apparent that the decals were going to give me problems. For some inexplicable reason Academy have made the fuselage invasion stripes, roundel squadron codes and registration all one decal. The whole invasion stripe area is made up of three decals, one either side and one on the underside. The wing stripes are about the

same. This for me was clearly not going to work, and so I decided to pull out all the stops and paint on the stripes. So after spraying cockpit green over the canopy frames and a good coat of primer had been applied the invasion stripe areas were sprayed white. Once dry the white stripes were masked off and the black was sprayed on. The yellow of the wing leading edge went on as well and also the sky colour of the fuselage band. Again when these colours were dry they were masked off and the painting of the standard RAF camouflage scheme could begin. I used Tamiya Acrylic Sky Grey for the undersides, Aeromaster Ocean Grey acrylic and a mix of Tamiya J.A Green and Tamiya Olive Drab for the upper surfaces.

With all the masking off I had to do because of the need to paint on the invasion stripes etc, it took me damn near an evening to get all the masking tape off! However the resulting paint job was stunning and with a coat of gloss varnish for the decals to sit on it was time to beat those decals into submission.

The roundels and codes etc., had to be carefully cut out from the invasion stripes which was a real pain in the bum, so my advice is to try and find an alternative set of decals. Knowing what modelling is today it

probably won't be long before someone produces a new decal sheet for this mark of Spitfire. The printing of the decals doesn't overlap very well in places and shows through and I am afraid this were the kit falls down badly, which is a real shame as every thing else about this kit is superb.

Decal Rating = 4/10

Conclusion

A great model with superb mouldings and good fit of all parts. As I said earlier this is a Saturday afternoon kit which progresses quickly with little fuss and is just a thoroughly enjoyable kit to build. It's just a shame about the decal sheet which is a crazy idea and Academy need to look into it. I must say that the finished model has now taken pride of place in my 1/48th scale Spitfire collection alongside my Warbird Productions Mark XVI which you may be familiar with.

Recommendation

The decal sheet you can throw away, but buy one today! Anyone can build this kit and make a good job of it and it is not an expensive kit, so I guess I should overlook the decal sheet, therefore I can recommend this kit to all.

My thanks to Toyway for the review sample.

Mitch Thompson



Curtiss P-40M



TECHNICAL DATA

Manufacturer:	Mauve
Scale:	1/48th
Price:	£18.99
Type:	Injection Moulded Plastic.
Parts:	Plastic; 73, Clear; 11
Decal Options:	2
Distributor:	Pocketbond Ltd, PO Box 80, Welwyn, Herts. AL6 0ND
Tel:	01438 798593

The Kit

This is the fourth in a series of models in quarter scale from Mauve dealing with the Curtiss P-40 family and this latest edition deals with the P-40M.

Many of the parts are common with the previously released kits, but all of these are relatively new mouldings so what you are looking at here to all intents and purposes is a new kit.

Construction

Having grabbed the review sample once it arrived I was impressed with the quality of the tooling. All the panel lines are recessed and although 73 parts do not equate to much for a 1/48th scale kit this model has very acceptable detail.

Construction starts with the fuselage halves and to them are added the familiar chin radiator assembly, instrument panel and cockpit sidewalls. These sidewalls and instrument panel do not fit flush with the raised tab inside the fuselage halves and if you look at the instruction sheet you will see that there needs to be a gap of 2mm between the sidewall inserts and the rear tab. There also has to be a 1mm gap at the

top of the instrument panel and although that may sound a bit odd it is relatively simple to obtain. Once your fuselage is together you can make up the cockpit floor and this is detailed with a seat, rear bulkhead, rudder pedals and control column. Once that is all painted it can be inserted into the fuselage from underneath.

The wings come next and you have to make up bulkheads for the interior of each wheel well from three parts. Having been forewarned I knew it was best to swap sides with parts A3 and 4 as they seem to fit better that way. Cement the lower wing to the fuselage and once dry add the upper wing panels. This may sound a bit back-to-front but it means that you can ensure a good joint at the front of each wing as well as at each fillet. At this stage I made up the propeller assembly and put it to one side and then fitted the tailplanes and the lower radiator gills (C22). This is as far as assembly goes until painting and decaling is completed.

Once all of that was dry I applied the smaller parts such as the canopy, lights, drop tank and undercarriage. Do not forget to mask these up and paint them at the same time as you do the rest of the model.

Accuracy

This is an accurate model and from the information given in the Illustrated Encyclopedia of Aircraft it scales out at the correct length and a little short by 4 scale inches. These are quite acceptable in this scale and the model truly captures the 'look' of this late series P-40.

Colour Options

There are two options given with this kit and they are 'Princess Pat II' flown by Ltn R.B. Westbrook and 'Reckless Prostitute' flown by Capt. J.A. Bade. Both machines were operated by the 44th FS, 18th FG in New Guinea in 1943.

Both machines are Foliage Green on top and the first option is Neutral Grey underneath whilst the second option is listed as being Grey (FS 36375) underneath. Both options have a white spinner and white bands on the upper and lower wing and around the fuselage. Option two also has the entire tail area painted white.

Having decided on which option I was going for, option two, I applied Vietnam Green (Xtracolor X116) on top with AeroMaster Gray Primer underneath. The tail and spinner were painted white and I decided that I did not want to do battle with the decals and therefore masked and sprayed the white bands on the wings and fuselage. The cockpit interior is interior Green (Humbrol 151), the instrument panel was matt black and the exhaust stubs were Gunmetal (X 506).

Decals

The two options in the kit have very little in the way of markings, their overall colour scheme being the decorative part of the model, and therefore there are very few decals to apply. Having said that it is a shame that no stencilling what so ever has been included and for an £18+ kit I would have expected that.

Having already said that I sprayed

(very badly!) the white bands on the wing and fuselage I am glad I did because the white of the decals is translucent and once applied over the dark green upper colour this darkened them considerably. So great was this effect that I had to touch-up the stars on the wings so that they matched the bands.

Each image was settled onto the model with Aero Set solution and once in place considerable amounts of Aero Sol solution were applied to settle the image on the model. Having done all this I was a little annoyed to see that the forward nose art decals still silvered...UGH!

Decal Rating = 7/10

Conclusion

Well I must admit that I enjoyed making this model and the ease of assembly etc was only tainted by those decals. I would recommend that you consider aftermarket markings for this model should you have one but apart from that I feel that this is a quality product. Neat little touches like the separate exhaust stubs and three part canopy may seem 'gimmicky' but they certainly do add a lot to the finished model.

Recommendation

At nearly £19.00 this is not a cheap kit, however it is well engineered and well produced and for that reason I would recommend this kit to anyone, no matter what skill level you are at. My thanks to Pocketbond Ltd for the review sample.

Richard A. Franks.



Kawanishi N1K2-J Shiden-Kai (George)



TECHNICAL DATA

Manufacturer:	Aoshima
Scale:	1/72nd
Price:	£13.99
Type:	Injection-Moulded Plastic.
Parts:	Plastic; 35, Clear; 4
Decal Options:	1
Distributor:	Amerang Ltd, Commerce Way, Lancing, West Sussex. BN15 8TE

The Kit

This is the first of a series of kits of this Kawanishi design by Aoshima. All of the

toolings are new and the model features recessed panel lines, nice overall detail and the option of a three part open, or single part closed canopy.

Construction

It is very rare to get a kit that is such a pleasure to make and I am glad to say that having made numerous review samples this kit ranks with some of the best for fit and ease of assembly. The interior is nicely detailed with a floor, control column, seat, rear bulkhead and

instrument panel. The instrument panel is not detailed and dials etc are simulated with a decal. There is no detail to the sidewalls in each fuselage half and this is a shame, but I am sure if you want to add detail here you will. The engine supplied is a little gem and it makes up into an impressive component which will benefit from dry brushing to bring out all the detail. The fit of the engine cowl to the fuselage was a point at which I was dubious of fit, however I was amazed to see this complex component just snap into position with no need for filler. Before the wings are fitted the cockpit insert is added into the fuselage from underneath and once the wings are in place you should find little or no need for filler. The final details before painting were the tailplanes and the assembly of the drop tank without its sway braces (Part No's C16 & 17).

As I have already said the kit comes with the option of a three part canopy for having it in the open position or a single part unit for the closed position. In this scale this is a good idea and one which will be welcomed by many. Once all painting and decaling was completed the canopy was cemented in place and the undercarriage units and drop tank were also fitted in position.

Accuracy

Going by the specifications given in René Francillon's "Japanese Aircraft of the Pacific War" this model is the correct span and just a fraction short in overall length. This deficiency is well within acceptable levels in this scale though and I feel that this kit captures the overall look of the Shiden-Kai far better than any previous kit has.

Colour Options

There is only one colour option given in this kit and it carries the standard Imperial Japanese Navy (IJN) colour scheme of IJN Green on top and IJN Grey underneath. I used colours from both the Xtracolor and AeroMaster ranges on my model. The interior and wheel well bays were all Interior Metallic Blue (Xtracolor X355) and the external colours were AeroMaster IJN Green (9090) on top and IJN Grey (9091) underneath. The propeller blades were Japanese Brown Primer (9096), the undercarriage legs oily steel (X503) and the tyres were Tyre Black (X505).

Once all the colours were applied the model was given an overall coat of Revell Gloss Varnish. Once the decals had been applied the model was toned down with a coat of Matt Varnish from the Revell range.

Decals

Initially I was hopeful about the decals in this kit. They were of excellent quality with shiny carrier film which did not extend too far outside the parameter of each image. You will however find that the stencil markings and tail codes will silver no matter how much decal setting and solvent solution you use. The Hinomaru for each wing and fuselage are quite dense, however I do feel that they darkened quite noticeably when applied over the dark upper colour. The way to get around this is to apply another decal of similar size from your spares box over the top. The opacity of the decals also became a problem with the rear fuselage band as it darkened over the upper surface colour but did not over the lower. This resulted in an 'odd' looking band and I suspect I would mask and spray

this if I had the option once again.

The biggest failure with the kit is that the decal placement instructions are incomplete and inaccurate. There are only plain Hinomarus for the wings and the instructions clearly show them with a white band. It is true to say that there are two white backgrounds on the decal sheet, however their size does not correspond with any of the diameters of the Hinomarus? No mention is given of the aircraft data stencils for underneath the leading edge of the tailplane on the port side. This is clearly shown on the box art and three types are included on the decal sheet but no mention of them is made on the instructions.

With all this confusion and contradiction your best bet is to use the instructions in conjunction with the box top artwork and then you should be able to sort everything out.

Decal Rating = 6/10

Conclusion

Having made up the Hasegawa kit in the past

as well as the 1/48th scale one from Otaki/ARII I am pleased to have been able to make this new version up from Aoshima. It is true to say that this model is more accurate than any before it and the ease of assembly makes it an ideal kit for all experience levels. Those confusing instructions and disappointing decals however may put a few off and that's a shame.

Recommendation

This is a sound kit which will make up straight from the box into an impressive model. It has the scope for added detailing but then again when doesn't a kit nowadays. I feel that the price may put a few off but the quality of the tooling and moulding certainly make this kit a joy to make and for that reason I can thoroughly recommend this kit to all. My thanks to Amerang Ltd for the review sample.

Richard A. Franks



Focke-Wulf Ta 152H-1



TECHNICAL DATA

Manufacturer:	Aoshima
Scale:	1/72nd
Price:	£13.99
Type:	Injection Moulded Plastic
Parts:	Plastic; 39, Clear; 3
Decal Options:	2
Importer:	Amerang Ltd, Commerce Way, Lancing, West Sussex. BN15 8TE

The Kit

This is an all new tooling from Aoshima and it deals with the H-1 version of Kurt Tank's superb high altitude 'ultimate 190'. The parts are well moulded with recessed panel lines and there are options for open or closed cowl

flaps and a single (closed) piece or two piece (open) canopy. Colour and marking information for two machines are included on the instructions although additional codes etc are included on the decal sheet.

Construction

When I first came across this kit in a model shop I wondered if so few parts could really be worth the price tag, so once a review sample arrived I immediately set about finding out. Construction of the kit is relatively straightforward and the cockpit is quite well detailed with decals for the side consoles and instrument panel. A pilot figure

is included although I chose not to fit it. The fit of the upper decking to the fuselage is always a difficult area with a 190/152 machine and thankfully this kit's part fitted just right. The slab topped upper decking just forward of the canopy is well portrayed and the little intake on the starboard side is included as a separate moulding. At this point in assembly you will have to decide on whether you are going to fit open or closed cowl flaps, as both are offered in this kit. The undercarriage is well moulded although the wheel hubs are incorrect. The characteristic stance of the Fw 190/Ta 152 series is easily obtained thanks to square pins on each oleo leg. An odd addition to the model is a drop tank for the centre-line. I have no information to support the fitment of such a tank to the Ta 152 and I therefore left it off.

The fit of the wings to the fuselage is excellent and the only place you will require any filler on this kit is at the extreme back of the wing insert on the lower fuselage. An option for an open or closed canopy is included and it is nice to see that these are

offered as two separate mouldings. The open option is in two parts whilst the closed one is a single moulding.

Having put it all together in a relatively short time it was now time to prime and apply the overall colour scheme. The undercarriage and canopy are still off at this time and they will only be added once assembly is complete.

Accuracy

This is a basically accurate kit and going by the specifications given in German Aircraft of the Second World War (R. Smith and A. Kay) this model is bang on scale (47' 6") and a little short in length at 35' when the correct length is 35' 5.5". This does not effect the overall 'look' and 'sit' of the model and it therefore captures the Ta 152 very well indeed.

Colour Options

There are two aircraft colour schemes depicted on the instructions, neither of them being identified. Both carry the Reich Defence bands of JG301 and neither have any Werke Numbers. Included on the decal sheet however are a selection of numbers in both yellow and green and a Werke Number which refers to a Ta 152 which was flown

after the war by Farnborough. This machine is coded 'Green 4' and if you wish to make it up from the supplied decals use the same colour scheme as described below.

The only problem with this kit, if you have no knowledge of Luftwaffe types, is that the instructions are in Japanese only and that includes the painting guide. I therefore opted for the standard Ta 152 scheme of RLM 82/83 over RLM 76. A mottle of RLM 82 & 83 is applied to the fuselage sides and tail and the colours I used all came from the AeroMaster Warbirds Color range of enamel paints. The cockpit interior needs to be RLM 66 and the undercarriage bays, insides of the undercarriage doors, oleo legs and tail wheel yoke are all RLM 02. The main wheel hubs are gloss black and the spinner and propeller are RLM 70.

I should also note that the leading edge of the wings on a Ta 152 had a wrap-around effect for the upper camouflage colours and this resulted in a ragged edge to each wing which is best replicated by spraying blotches

of the upper colours onto the leading edge of each wing.

Decals

As I have already said the kit comes with a wide selection of decals and they are all printed very well with small amounts of the shiny carrier film visible around each image.

Having selected what markings you are going to apply, and I would suggest that you research this point as it may be that the option you choose has a different colour scheme to the one mentioned above, the images settle down well on to a gloss surface and reacted well to Micro Set and Aero Sol decal solvents.

Having said this however I should report that the numerous small stencils available with this kit did not settle at all well and most of these images silvered, which was a shame.

Decal Rating- 8/10

Conclusion

This is a simple and effective kit which is far easier to build than the Dragon version. I

would say that this kit is suitable for all as far as assembly goes but the lack of information with regard to colour and markings and the high retail price may well put it outside many modellers grasp. This is a shame as this really is a nice kit and before anyone mentions it, yes, I know I forgot to fit the supercharger intake on the starboard side of the engine cowling. It just goes to show that we can all make mistakes.

Recommendation

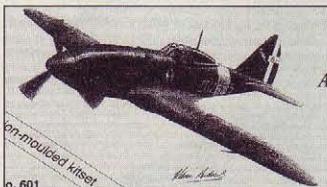
One for everyone this kit and if you know sufficient about the topic then I am sure you will have no problem in making this model, no matter what skill level you are.

My thanks to Amerang Ltd for supplying the review sample.

Richard A. Franks



Reggiane RE 2005 'Sagittario'



TECHNICAL DATA

Manufacturer: Falcon

Scale: 1/48 Price: £19.95

Type: Limited run injection-moulded plastic with white metal and vacformed clear canopy

Parts: Plastic 35, Clear 2, Metal 20.

Decal Options: 1

Manufacturer: Falcon Industries, PO Box 42-093, Wellington, New Zealand

which are supplied.

The injection plastic on first glance looks like a complete nightmare but once the huge injection gates have been cut off with a razor saw and cleaned up things don't look so bad. Be careful though as the plastic used is more akin to bakelite and is very brittle. There are panel lines engraved in the plastic, but these are in need of a little re-scribing to make them a little more prominent. The white metal is good quality and needs a little cleaning up, but nothing too strenuous.

The vac-form canopies are lovely and

crystal clear. Along with the decals they are the best aspect of this kit.

The instructions are rather nice also with written assembly instructions as well as diagrams. There are a nice set of drawings which depict a colour option and a head on line drawing for checking undercarriage tracking, wing dihedral and propeller blade geometry. In addition to this there are four black and white photographs; three of the cockpit and one of the wheel wells.

Construction

This began with an evening sawing, scraping



The Kit

This is one of those kits that seem like a good idea at the time as the thought of having a Reggiane Re 2005 in 1/48th scale in the collection was almost overwhelming. It did not look as though it was going to be an easy ride on a second look, but undaunted I dived into the box and got scraping!

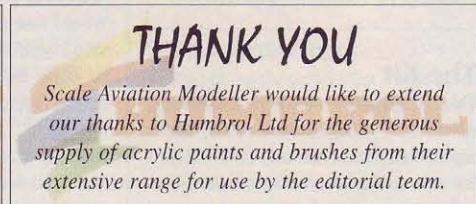
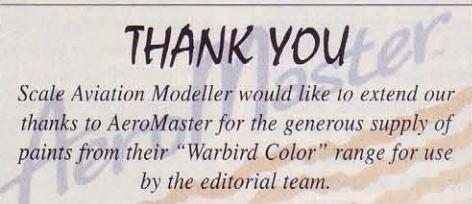
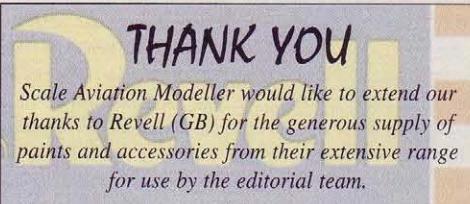
As you will have guessed this is a multi media kit being made up of limited run injection plastic airframe, white metal undercarriage and engine exhaust ejector stubs etc. and vac-formed canopies, two of

and sanding by the end of which I was presented with two piles. One of parts and one of scrap. This was a new area for me as a lot of hard work was needed to get rid of all those blasted thick mould runners caused by low pressure injection methods.

Special attention was needed in the cockpit area. Both the fuselage sides and the interior walls needed a lot of thinning down to get a reasonable fit. The interior detail once painted is very good and only needs the addition of seat harness and rudder pedals. It is best to join the fuselage first then add the cockpit walls and instrument panel, paint and then add the pre-painted cockpit flooring and seat.

The hole which takes the exhaust ejector stubs needs to be opened out a little and it is best to drill holes in the tail plane mountings for brass rod pins later. Copious amounts of filler are needed on the fuselage joints as is also the case with the wings, especially on the leading edges, which having gone off at the mould runners madly had not done any favours for me.

The wings were glued on in a two stage process. Firstly gluing the front and rear in position and then, once dry, cranking up the wings to the correct dihedral, with a masking tape strap. There were still huge gaps between the wings and the wing fillets so



they were backed with plasticard and filler and left to set hard.

The undercarriage is a rather complicated white metal construction that is very impressive once cleaned up and assembled. There is no real need to paint it as it is almost the correct silver colour already (Why make extra work for yourself).

All the ribs and formers that are evident in the wheel wells have to be scratch built from plasticard but to do this properly the top half of the wings need further thinning out and obliteration of the detail already there.

The propeller is provided as three separate blades and a spinner and I decided to short circuit the system a bit here and used a scrap VDM unit off the old Otaki kit, slightly re-shaped the blades and carved out the holes in the spinner to take the complete propeller unit. The result looked a lot better.

The canopy is up to Falcon's usual

excellent quality and you get two to play with which enables you to model the canopy open without any trouble.

Painting

There is only one standard scheme which does for all the marking variations on the decal sheet. It is not a very complicated one; Light Blue undersides and Dark Olive Green upper surfaces. As you will have guessed by now it's on with the Holt's grey primer first. I then airbrushed the rear fuselage section white and then masked off the white fuselage band when dry.

The undersurfaces are described as light Blue Grey or Grigio Azzurro Chiaro which sounds very much as though it was RLM 76 to me, so that's what I used (My own Tamiya mix of course!). The upper surfaces are described as Dark Green or Verde Oliva Scuro which sounds like Dark Olive Green. After a few references

were consulted I mixed 50/50 Tamiya Olive Green and Tamiya Olive Drab, this did the trick.

The demarcation of the green is rather strange as it is only the wings and the tailplanes that are Light Grey Blue underneath. The cowls, fuselage and a large lip on the leading edge of the wings are continued in Dark Green.

Decals

The decal sheet has four options for aircraft of the 362a Squadriglia. The sheet is very well printed but the carrier film is rather thick and I had big trouble with silvering no matter how much MicroSol I used. The carrier film also covers a much larger area than the printing and overlaps other areas of carrier film, it therefore needs to be trimmed back considerably. It is a shame that good quality decal printing should be let down by poor carrier film.

Decal Rating = 5/10

Conclusion

This is a modeller's kit! It is the nearest thing to a vac-form kit that I have had without actually being one. This kit needs a lot of time spending on it and if you do spend the time on it then a lovely model will result. I certainly like my Reggiane 2005 and it has pride of place alongside all my Italian Bf 109s.

Recommendation

This is another kit that is for the experienced modeller and an important addition to your collection if you are an Italian buff. My advice is that it does appear to be correct and is worth persevering with, it should pose no problem if you are a vac-form builder because in many ways it is a close relative of the vac-form kit.

Mitch Thompson

De Havilland Canada Chipmunk



TECHNICAL DATA

Manufacturer:	Airfix
Scale:	1/72nd
Price:	£2.99
Type:	Injection moulded plastic
Parts:	21 grey plastic, 2 clear
Decal Options:	3
Distributor:	Airfix, Marfleet, Hull, HU9 5NE
Tel:	01482 701191

The Kit

This kit is one of the 1996 re-releases from Airfix. Over the years it has gained the status of an 'old favourite', and will certainly be familiar to more than one generation of modeller, having been available, on and off, for over 25 years. This latest re-release sees the kit appearing in the new style Airfix packaging, and with a nice new decal sheet, but the basic moulds themselves are unaltered from before. The kit parts this time around are moulded in grey plastic, and there are 2 sprues containing the various parts which are surprisingly 'flash' free on the example built for this review. There is a separate clear plastic sprue with two rather thick cockpit canopy options. The grey plastic airframe mouldings are almost entirely covered by ugly and overscale rivet 'detail' which is best removed altogether or at least sanded down to make it much less prominent. Dimensionally the model is marginally short, especially in fuselage length.

Construction

This is very straightforward, and the kit's

instructions are easy to follow - indeed, this kit is without doubt one of the easiest and most simple of all to build and is ideal for beginners. Built straight from the box it makes up into an attractive and easy model to construct.

Cockpit interior detail consists simply of two crude seats and two crew members who are cut off at the knees. I included them in my model for the purposes of this review but the whole cockpit area cries out for a lot of detail to be scratch built and added to the model by the more discerning or experienced modeller. Fuselage construction is followed by the building up and addition of the wings, these being a one piece lower wing component with the dihedral angle moulded into it. A little filler can be added at the wing roots after the wings have been joined to the fuselage assembly due to the somewhat odd way the wing fillet is split up, with half of it moulded integral with the lower wing piece and the forward part of it on each side moulded on the fuselage sides themselves. The horizontal tailplanes also need a little filler if the joint lines with the rear fuselage after assembly are to be made less obvious. The construction process is completed with the addition of the simple front fuselage/propeller assembly, the undercarriage and other smaller parts.

As previously stated there is a choice of cockpit canopies in the kit, and their use depends upon which version you wish to finish the completed model as, either Canadian or British operated. This is a fine idea except that Airfix's pattern makers all those years ago when the kit was created had missed the fact that the majority of the Canadian operated Chipmunks also featured a different main undercarriage to the British aircraft in addition to a different cockpit

canopy, and the undercarriage as included in the kit is not applicable to a Canadian military machine as included on the kit's decal sheet.

The exhaust is also rather crudely moulded and comes out the wrong shape, it should really be replaced by a proper pipe protruding from the lower right hand front of the cowling out of the slot provided.

Colour Options & Painting

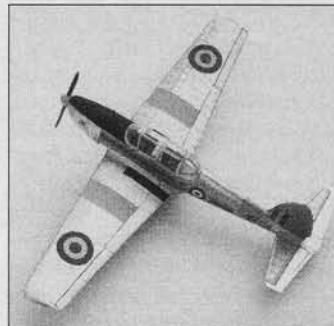
The three choices of colour scheme given on the kit's decal sheet comprise two RAF machines, and a Canadian example. One of the British aircraft is silver with yellow trainer bands and flew with the Cambridge University Air Squadron in 1959, while the other is a red/white/Light Aircraft Grey example from No. 7 Air Experience Flight in 1994; the Canadian machine is stated to be from the Central Flying School of the Canadian Armed Forces (Successor to the Royal Canadian Air Force) in 1970. The kit's instructions include a comprehensive four view plan plus propeller colours for each option in turn, together with number codes for the relevant Humbrol paints. Of these choices, the Cambridge UAS example has appeared various times in the past with previous releases of this kit, but the scheme

has been tidied up with slightly revised decals (particularly the badge and stencils on the left hand cowling). The four view plan for this specific aircraft however is incorrect in that it shows the yellow wing trainer bands as extending back to the trailing edge of the wings, over the flaps - this is not correct, Chipmunks wearing this colour scheme did not carry the yellow bands over the control surfaces and flaps - the review model as photographed shows the correct arrangement.

Having chosen the silver and yellow Cambridge option for my review model, I airbrushed the model with Humbrol No. 11 Silver overall having masked the wing and fuselage bands which were then airbrushed Humbrol No. 69 Gloss Yellow. The anti-glare panel ahead of the windscreens had also been masked off and was then painted Humbrol No. 33 Matt Black, and the spinner painted Humbrol No. 47 Gloss Blue.

Decals

The best part of this kit is the decal sheet, and it represents a trend now practiced by a number of manufacturers in re-releasing old kits with new or at least better printed or researched decals than were available when the particular kit first appeared. On the decal sheet included in the kit the various subjects were well printed and generally in register. The roundels for both the British and Canadian machines are printed with the central red element separate so that this can be positioned accurately in the centre after the blue and white basic disc of each roundel has been applied to the model. There is a nice level of stencilling for the No. 7 AEF Chipmunk and generally the whole sheet is very comprehensive. I found no problems with the application of these markings



following the painting of the review model. The only real criticism is that there is a large overlap of carrier film over some of the subjects - as a rule I always trim away carrier film from around each individual subject and this would seem a wise precaution with some of these decals. After application of the various decals I duly gave the model an airbrushed coat of Humbrol SatinCote,

except for the black anti-glare panel which should remain matt.

Decal Rating = 8/10

Conclusion

The completed model looks very attractive in its training colours, and the basic simplicity of the kit makes it an ideal model for beginners. Having now sat back and

looked at the completed model, the Silver that I used for the overall colour - as recommended in the instructions - seems to be a little too bright and clean and would perhaps best be replaced by Humbrol MetalCote Polished Aluminium, with the 'fabric' areas of the model painted in a duller finish such as MetalCote Matt Aluminium.

Recommendation

Although bearing in mind the various criticisms mentioned here, in total this is a kit that can be recommended, and it forms the basis for more detail to be added if so wished. My thanks to Airfix for the review sample.

Malcolm V. Lowe

Lockheed F-104G Starfighter

TECHNICAL DATA

Manufacturer: Revell
Scale: 1/72nd Price: £8.95
Type: Injection Moulded Plastic
Importer: Revell (GB) Ltd, Binney & Smith Ltd, Ampthill Road, Bedford
Tel: 01234 360201

The Kit

This is a new tooling of an awesome aircraft and it represents the power and missile-like lines of the real thing very well indeed. The first impression on opening the box is "ooh, aah lovely" and you are not disappointed.

The kit offers a single seat variant from 3 Luftwaffe units and a variety of stores options.

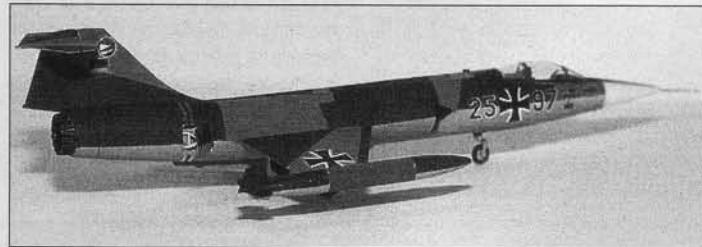
Construction

The new tooling is so apparent and so well thought out. The fine etched panel lines are wonderful and the detail on the tailplane is delicious. The first thing to get stuck into is the Martin Baker ejector seat. This comes in 4 parts and it's a shame to put it inside the aircraft when you've finished. I painted the 2 main parts of the seat Tamiya XF-53 (Neutral Grey) and then picked out the detail with drybrushed XF-2 (Flat White). To this I added the separate parachute pack which was painted XF-61 (Dark Green). Finally I added the top part of the headrest and upper firing handles (picked out in yellow and black). The only extra bit I added to the whole kit was a brass-etched harness set with the straps painted XF-60 (Dark Yellow).

The release handle on the lower right-hand side was picked out in yellow and black using a pin.

The cockpit tub is connected to the rear bulkhead and this, in turn, connects to the forward wheel-well. The only thing to be careful of is the join between the sidewalls and the floor of the tub. It's a bit thin and could break.

You have two options for cockpit detailing. Excellent raised instrumentation detail or you can use decals which look like photographs and remove the raised detailing. I had intended using the decals but they are slightly overscale (which is an enormous shame given the level of detail). I could have trimmed them but this would have removed several key instrumentation panels so I elected to drybrush the raised detail instead (an option which worked very well indeed).



The whole unit was sprayed XF-53 (Neutral Grey) before I picked out the individual instrument panels with XF-1 (Flat Black) using a number 0 sable brush. The raised detail on the side panels and the main instrument panel was then highlighted by drybrushing with XF-19 (Sky Grey) and then over brushing with XF-2 (Flat White). I then used a pin to pick out specific bits of white, red or yellow on the instrument panels, referring to the Verlinden Lock-On publication No.1 F-104 G/J Starfighter which has some excellent detail pictures.

Finally the complete tub and seat were glued into place. The stick and front panel was added and the forward fuselage completed. The detail is so good that the fabric covering under the windshield even has slight folds in it. I painted this XF-51 (Khaki Drab) and then highlighted the folds with 75% XF-51 and 25% XF-1 (Flat Black).

Section 6 in the instructions refers to the intakes and splitter plates but I decided to leave these until the whole fuselage was complete, as I could check the fit better if I had the whole fuselage to align with.

The kit makes good use of sub-assembly sections so you can be working on a variety of sections at the same time.

The access panel for the gun (Pt No 18) is separate and needs to be glued into place on the port side of the forward fuselage. When I checked the fit, you guessed it - it fell straight through. I added a few small tabs from plasticard to help out.

The rear section of the fuselage goes together without any hassle. The exhaust cone I painted Xtracolour X504 (Exhaust) and then drybrushed with Tamiya XF-56 (Metallic Grey) to pick out the detail.

The two fuselage sections joined together well and the separate main undercarriage bay has lots of wonderful detail. Part number 34 should overhang part number 32 so that it can all slot into the forward fuselage section - don't trim anything!

The main undercarriage legs (Pt No 33) must be pointing in the right direction - the locating lugs for the hydraulic actuators (Pt Nos 36 + 37) must be facing forward. One problem was the location for the actuators on the main doors (Pt Nos 40A + 43A). It's all a bit vague. There were no locating holes or evidence of a point to drill out. I simply chopped off the ends and made a calculation of position based on hours of research and a large glass of red wine. It all looks OK.

The only area that needed filler was the underside join for the forward fuselage section and a little bit under the exhaust.

The wings and tail section went on with no fuss at all, although the T-tail did give me one bad moment when, after sitting beautifully during a dry-fit, it stubbornly refused to align properly once superglued (it must be spot-on or it will look horrible - you cannot get away with mis-alignment on an F-104).

The forward undercarriage leg locates into a hole and 2 slots on the side of the wheel-well. If you push the leg all the way in it will be give a false sit to the aircraft. The leg should be at 90 degrees to the bottom of the fuselage, not tilting backwards which is what happens if it goes all the way in.

The rest, as they say, was easy. The main problem was having the patience to wait until everything was dry before pushing on to the next bit.

Once it was painted I added all the little clear plastic navigation and formation lights, as well as the landing lights on the main gear doors.

Colour Options

The 3 schemes all use the standard splinter camouflage scheme for Luftwaffe F-104s in the 70s and 80s. You could, I'm sure, easily incorporate the lizard green scheme of the late 80s with the decal set and this will probably be my next project with this kit.

I used 50% XF-19 (Sky Grey) and 50%

XF-16 (Flat Aluminium) for the silver-grey colour of the undersides. This was carefully masked before using 80% XF-53 (Neutral Grey) with 20% XF-18 (Medium Blue) to give the bluish-grey colour used by Luftwaffe units. Finally, an extreme amount of masking was oversprayed with XF-62 (Olive Drab) to produce the splinter scheme.

The nose-cone was sprayed XF-2 (Flat White) and I found XF-22 (RLM Grey) to be an excellent colour for the matt green/grey anti-glare area on the nose.

Finally I primed the tip-tanks and then masked the centre section before spraying with XF-62. I then used Humbrol 205 (Matt Fire Orange) for the day-glo orange.

Decals

The kit provides options for 3 Luftwaffe units: Jabo G 32 at Lechfield with special markings for the Tactical Weapons Meet 1976 (as portrayed on the box art).

Jabo G 36 Rheine/Westfalen or, the scheme I selected, JG 74 "Molders" based at Neuberg.

The decals have lots of carrier film and some silvered very easily. Even the usual addition of MicroSet and MicroSol could not assist to any great extent. I tested an area with gloss varnish first and this still didn't make much difference.

Decal Rating = 4/10

Conclusion

A great kit which was a pure joy to build. There are so many great schemes that can be applied to F-104s that this must be a winner for both Revell and modellers. This was one of the best "from the box" kits that I have built in years with minimal fuss and no rude words. The decals could be better but who cares when it goes together so well and looks so good. Can we please have a 2-seat variant as soon as possible and also the "S" variant.

Recommendation

You will enjoy this one and I recommend it without reservation. The detail addicts will be kept happy and the beginners will have a relatively easy time. If you open up some of the access panels, this kit will last a long time and be excellent value for money.

My thanks to Revell (GB) for the review sample

Steve Bentstead

...News Update continued from page 326

PD Models

A 1/48th scale conversion of the Bf 109G-2 to G-6 is the topic of the latest conversion from this Australian company. Based around the Hasegawa kit the conversion is resin and consists of six parts as well as a section of clear stock for the armoured headrest. The set seems to be on sale for about \$19.00 in the USA, so it should be about £14.00 over here. Check with H.G.Hannant Ltd for details as they import the range in the UK.

Pend Oreille

This company used to be called E.C.P. Phoenix and apart from the 1/48th scale resin Sunderland mentioned in the April edition, there is also a Hawker Tempest, LeO 45, Caudron 714 and Arado Ar 196 all due in 1996. From price and availability you should contact their UK importer, I.W. Models.

PM Models

Having said that there were no new releases due from this Turkish source in the Toy & Hobby Fair report, I am pleased to say I was wrong. Due in 1996 will be the Horten Ho 229 two-seat nightfighter, Messerschmitt Me P.111, Vultee BT-13 Valiant, Heinkel He 46 and Junkers Ju 287. All will be to 1/72nd scale although I have no idea of price and release dates as yet.

R&D Replicas

This American company produce 1/48th scale resin kits and throughout 1996 they intend to issue kits of the Focke-Wulf Fw 189 'Uhu', Blohm & Voss Bv 141B-0, Vultee P-66 Vanguard and Republic F-84E/G Thunderjet. I do not have a UK source for these kits so you may wish to contact the company direct. Their address is:

P.O Box 2523, Castro Valley,
CA 94546, USA.

Rebellion Creations

This is a new company to me. Based in Las Vegas the company produce resin kits and conversions and due in the latter part of 1996 are a MiG-31 F*R*X conversion in both 1/32nd and 1/72nd scale, a Sukhoi Su-35 Flanker conversion in 1/48th and a X-15 Delta and B-70 pylons in 1/72nd scale. If you want to know more you should contact the company direct at:

531 Bedford Road, Las Vegas,
NV 89107, USA.

Rug Rat Resins

The latest news from this company is that they intend to release 1/72nd scale kits of the Short Scion (£20.00) and the Airspeed

Ferry (£20.00) this year. Due very soon will be the De Havilland DH. 90 Dragonfly in 1/72nd scale and this will include decals for G-AEDT, a Swedish Air force, Rhodesian and Nyasaland Airways machines. The price for this kit is £21.95. In 1/144th scale they will produce a Comet I (£26.45) which will, I am sure, be very welcome to many.

Sanger

Many of the kits produced and marketed under the Contrail label are now retailed under this label and in 1996 there will be an Antonov An-2 Colt, Vickers Wellington and Mitsubishi G3M Nell in 1/48th scale and the Antonov An-24 Coke and An-22 Cock in 1/72nd scale. The 1/48th scale kits should be about £21.00 each, whilst the 1/72nd scale kits are £24.00 and £25.00 respectively.

Scratchbuilders

This American company was mentioned in the February 1996 News Update and the Avengers listed there as for future release have now been confirmed and identified. Both kits are mixed media with resin, vac-formed, metal and etched components and are to 1/32nd scale. There will be two versions of the Avenger and they are listed as the TBF/TBM-1C and TBF/TBM-3. Each kit costs about \$111.95 each plus post and packaging. Contact them on 001 916 648 8888 for more details.

Welsh Models

Ever expanding this well established 1/144th scale kit series, the next issues should be the TU-154M, the MD-11 (American Airlines) and DC-3 (Swissair), plus the C-121K Warning Star (USAF and USN). The most recent issues have been the A.W. 27 Ensign and the Boeing B747SP. These kits cost £15.50 and £29.99 respectively. Each kit is vacformed plastic with injected and metal detail parts.

SMER

Repackaging many manufacturers' kits has been all the craze for this Czech firm and in the past they have offered some of the more sought after kits from companies such as Heller, with the Mureaux 117, Nieuport-Delage NiD 622 and Bloch 210 already available. To follow this there will be the Focke Wulf Fw 56 Stösser, Caudron C.714, PZL P.23A/B Karas, Vought F-8E/J/FN Crusader, Etandard IVM and Junkers Ju 87B-1 all in 1/72nd scale. All of these kits are from Heller moulds and each should feature new decals by Propagteam.

Special Hobby

This Czech company produce 1/72nd scale kits in limited-run injection moulded plastic. The next two issues from them will be the

Focke Wulf P.II single seat fighter project and Me262 3 seat project in 1/72nd scale. Each kit will include etched parts and they will retail for £9.95 each. The UK importer for the range is H.G.Hannant Ltd.

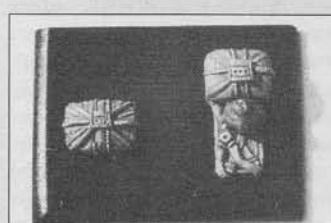
Stratosphere Models

This is a Canadian firm who produce resin kits of more unusual types. Due in 1996 from them are the Rockwell XFV-12A, Westland/Agusta EH101 Merlin, MiG YE-152M, Mirage G.8, North American YF-107 and Convair XF2Y-1 Dark Shark. Each kit will be to 1/48th scale. If you want more details contact the firm directly at:

2940 Barclay, unit B, Montreal,
PQ H3S 1J9, Canada.

Scale Model Accessories

A couple of the most recent releases from this company include SMAAR 027 which



depicts an RAF Mechanic and MT Driver (£4.77). SMAAR 028 which offers two RAF pilots (sitting) and their parachutes (£6.33) and SMAAR 029 a set of 4 folded and 2 open parachute packs. All are to 1/48th scale. Coming in May will be a 4 man crew for the Catalina and in May or June there will be a second set of Luftwaffe personnel pushing aircraft. This set will include 3 figures and a towbar. If you want any information on the SMA range contact them on 0181 292 5485. A new price list is also available.

Tamiya

Available as I wrote this was the new 1/48th scale F-51D Mustang in 1/48th scale. This kit is basically an upgrade of the previously

released P-51D kit and it includes rockets and bombs for a Korean War era machine. This excellent kit is back up at £17.99 but it is still worth looking out for.

Toad Resin

New from this firm are a series of Junkers Ju 288's and this will include the Ju 288A and C. The Ju 290 and Ju 390 will also be produced, as will the Messerschmitt Me 264 V-1. Each kit is to 1/72nd scale and is produced in resin and pewter, with vac-formed canopies and no decals.

Sign

Having produced the Rotorjeep in 1/72nd scale this Czech resin kit manufacturer will produce the Ryan X-13 Vertijet and Savoia Marchetti SIAI S-56B in 1/72nd scale.

Vami

This resin kit manufacturer is due to release kits of the following types in the near future. The Renard 31, Arsenal VG33, MS Vanneau IV, MS 447, Breda BT, Leybiche LBZ, Marboussin M120 Corsaire and the BN Trislander. Each kit is to 1/72nd scale. For more details contact I.W. Models of Luton.

Wingnut International

What a great name! This American company produce 1/72nd scale resin kits and conversions and the releases due in 1996 are as follows:

72001 Republic XP-72 'Ultrabolt' The 3,500hp powered thunderbolt capable of 500mph! This is a limited edition resin kit complete with Scalemaster decals: \$29.95; 72002 Junkers Ju 88G-10 *Conv* for the AMT/Ertl Ju 88G-1/G-6 kit. This simple conversion consists of a two part fuselage which replaces the kit example: \$19.95; 72003 Messerschmitt Me 509. A complete resin kit due for release in May 1996: \$29.95;

72005 Junkers Ju 88H 'Atlantic Destroyer'. This resin conversion features the 'super-stretched' fuselage for this long range anti-shipping variant: \$TBA;

72006 Junkers 'Führungsmaschine' Conversion set for this 'Stretch 88' Mistel: \$TBA;

On the drawing board for the future are: F7F-3N Tigercat, Messerschmitt Bf 109H & Blohm & Voss Bv 155C all to 1/72nd scale.

If you want more details contact them direct at: 1065 Route 173W, Asbury,
NJ 08802, USA.

Waldo Models

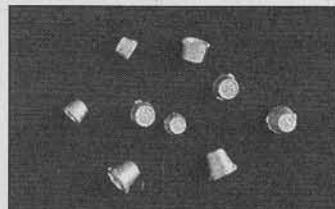
Two new 1/48th scale resin kits are due from this company very soon, the Bristol M.1C and Hansa Brandenberg W.29. I don't have a price or release date yet but you can contact H.G.Hannant Ltd for more details.

Accessories

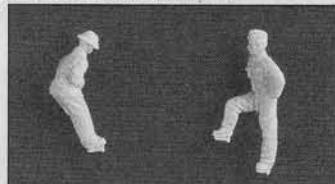
Latest from Scale Model Accessories

Some of the most recent figures and accessories to be released by this company have made their way to us. There are just two new sets of 1/48th scale figures and a neat little set of buckets in the same scale.

Starting with the figures, the first is set number SMAAR 027 and this is entitled 'RAF Driver and Mechanic Set'. As you will gather the set comprises two figures and these are of an RAF MT driver kitted out in field service dress a leather jerkin and a steel helmet. The second figure is an RAF Mechanic and he is depicted in his one-piece overalls and a forage cap. The driver figure is depicted sitting so he can be placed behind the wheel of a suitable vehicle and the mechanic is standing with one foot up on the running board of a vehicle etc, probably in conversation with the driver if she was a WAAF! Each figure is well cast with no air bubbles visible and about the only comment



Set number SMAAR 026 offers you a superb little selection of pewter buckets



An MT driver and a mechanic, just right for the Bedford truck, are offered in set SMAAR 027

I could make is that the driver's steel helmet



These seated pilot figures and parachute packs are offered in set SMAAR 028

looks a bit big.

Next comes set SMAAR 028 and this is entitled 'RAF Seated Fighter Pilots & Chutes Set'. As you will have guessed this is a two figure set which also comes with two parachute packs. Each figure is depicted sitting and one has a leg draped down, as if off the back of a lorry etc. The parachute packs are depicted as one standard with the harness not attached and the other has the harness fitted and the pilots flying helmet

resting on it, all of which makes good set dressing for any diorama. Once again the figures are well cast with no surface imperfections visible.

The final item is set SMAAR 026 and this is a packet of pewter buckets of various sizes and styles. There are nine in the pack and they are well cast although you will have to add handles from wire etc if you so desire.

Overall once again these are all products which I can recommend. With the increase in the number of kits available in 1/48th scale it only seems fitting that there should be a similar 'explosion' in figures and detail sets. If your hobby includes diorama building and this is your scale then I do not think you will go far wrong in investing in any of the figures from the SMA range.

The sets featured are priced as follows:

SMAAR 026	£3.21
SMAAR 027	£4.24
SMAAR 028	£5.77

My thanks to SMA for the review samples.

Breguet Upgrades from Hitkit

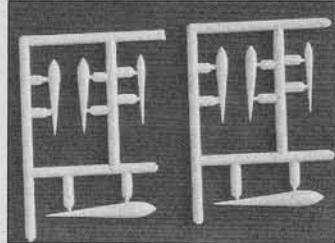
Apart from their excellent mixed media kits, this company also produce etched and injected detail sets. Two of the most recent have just made their way to us and they both concern the Breguet 19 in 1/72nd scale.

The first set is completely produced in brass and it is the wing extension required on the Breguet 19 A2/B2 for what the instructions simply call 'Orlinski's plane'. Way back in 1932 a Lt. Boleslaw Orlinski and Sgt. Leonard Kubiak make a long distance flight from Warsaw to Tokyo and back (22,600km). On the way back they broke the tip of one of the Breguet 19's wings and had to cut it off. To balance the aircraft they had to shorten the remaining wing, but instead of cutting it off they simply removed the fabric covering. What you get with the set therefore is all the ribs and internal structure to make the tip of one wing. You remove the existing tip just outboard of the strut and then build and



Fancy a Breguet 19 with one wing tip missing and the other without any fabric? Then this set is just for you as it allows you to convert the Bre 19 to Lt. Boleslaw Orlinski's long distance machine of 1932

install the new tip as a direct replacement. Sounds easy to me, NOT. Anyway the etched brass is beautifully done and the material is of sufficient strength to make for a very sturdy end product. It will certainly look very neat once built and will probably produce a few odd looks from fellow modellers. My only question is, surely the wing with the tip cut off could be looked into, unless of course the open tip was



A neat little set of bombs and racks for the Breguet 19 are offered in this set.

covered over? That's a point for conjecture.

The next set comprises bomb racks and bombs for the Breguet 19A2/B2. The set is made up of twenty-six etched brass and eight injection moulded plastic parts. There are two complete bomb racks for the undersurface of the aircraft and these are made entirely out of etched brass. To go on these there is a choice of PuW 50kg or PuW 100kg bombs. The set also includes a PuW

300kg bomb, although this was never fitted to the Bre 19. Each bomb is made up of two plastic body halves, etched fins and centre strap. The instruction sheet gives precise details on the fin positions and the exact dimensions for the bomb rack positions on your kit, so that should prove little trouble. Overall this is a good set and the injected parts are excellent with, once again, suitably thick brass for the etched components. One question would be, what colour are the bombs?

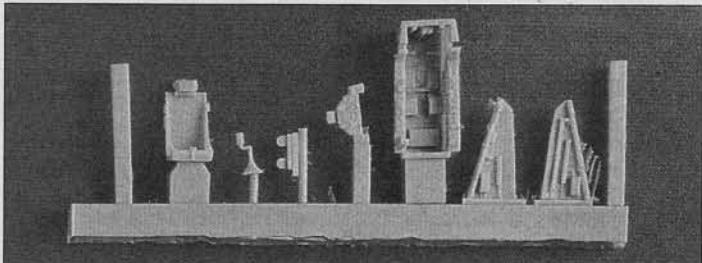
My thanks to HitKit for the review samples. I do not have a price for either of these two sets although they can be recommended to the more experienced modeller. If you want more details about these or any other products in the HitKit range you should contact their UK importer, H.G.Hannant Ltd.

Fancy a Breguet 19 with one wing tip missing and the other without any fabric? Then this set is just for you as it allows you to convert the Bre 19 to Lt. Boleslaw Orlinski's long distance machine of 1932

F11F Tiger Upgrade from Delta

One of the latest releases by Delta Aviation Publishing, in their 'Delta Bits' range is an excellent little cockpit update for the Hasegawa Grumman F11F Tiger in 1/72nd scale.

The set is made of resin and it consists of one block on which seven components are cast. These consist of an ejection seat, control column, rudder pedals, instrument panel, cockpit tub and port and starboard cockpit sidewalls. The resin in which these parts are cast is grey and the detail achieved is very good in this small scale. The ejection seat has very fine sides, making it look nicely to scale. The cockpit



A nice new upgrade for the interior of the Grumman F11F Tiger is now available from Delta Bits

tub insert consists of the floor and side consoles and the detail here is certainly a vast improvement on the parts given in the

Hasegawa kit. The instrument panel features raised instrument dials and careful painting and dry brushing will bring this, and all the other areas, to life. The set comes with a small (A4) sized instruction sheet which gives a narrative description of the way in which the components should be fitted to the kit. About the only area you may have to reject are the sidewall inserts.

Overall this is an excellent little set and there are only minimal amounts of flash on the components, none of which will cause any problems. With a price tag of just £5.95, this set (No 5010) is certainly worth considering if the topic is to your liking.

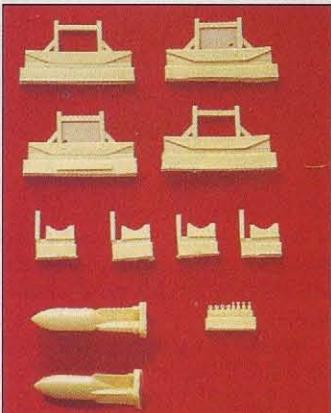
Delta products are stocked by specialist model shops or they can be obtained directly from the manufacturer. Contact them on 0114 233 4187 for more details.

My thanks to Delta Aviation Publishing for the review sample.

The Latest from KMC

Kendall Model Company has been very busy of late and they have produced a number of new upgrades and accessory packs in both 1/72nd and 1/48th scale. Most of the new items have been noted in our News Update pages over the last couple of issues and we have recently received three of these new items. All of the products we have are to 1/48th scale.

The first is 48-5033 and this is an SC250



A neat little set of two SC250 German WWII bombs and their wooden sleds are offered in 1/48th scale as set number 48-5033

bomb complete with a wooden handling sled. The set comprises twenty-six resin pieces and a length of brass wire. There are two complete bombs and sleds in this set and I am glad to see that the fins of the bomb are now cast onto a block. When the earlier versions were released this was the area to suffer the most in transit and this current method of moulding them should reduce the risk of damage quite dramatically. There is some fine flash to remove from some pieces, but nothing to worry about and the moulding are excellent with no air bubbles visible anywhere. This set cost £7.50.

Next comes 48-5034 and this is a set of control surfaces for the Bell P-39Q Airacobra. Designed for the Monogram kit, in either its standard or Pro-Modeller boxing, the set comprises the usual separate rudder, tail and wing control surfaces. As usual they are beautifully cast, with no air bubbles and excellent fabric effect. The set costs £7.50.

The final offering is one of the upgrade sets and it is for the new MiG-15 kit recently released by Tamiya (See Review). The set, number 48-4006, consists of thirty-one resin and twenty-two etched brass pieces. The main resin part is a new cockpit tub and into it goes a new seat (which is supplied in two styles with the seat belt harness moulded in

position), instrument panel (with etched brass overlay), control column and gunsight. There are also numerous control levers for the sidewalls and the cockpit sill gets a set of etched canopy runners and locking levers. Externally there are new resin speed brakes and optional etched interiors for the flaps and undercarriage doors. The final components are a new set of wing fences to replace the kit's examples. These new fences are etched brass. Not mentioned on the instruction sheet,



Separate control surfaces for the Monogram P-39Q Airacobra are offered in set 48-5034

but included in the set, is a complete set of separate control surfaces. These are all resin and will allow you to have everything hanging if you know what I mean!

Overall this is a most impressive set with loads of detail in the cockpit area. The quality of casting is, as we have become accustomed to, very good and about the only problem I would foresee for the 'mere mortals' amongst us is that some of the resin parts are very small indeed. I can see a few of them heading off towards 'George the part eating



Although the Tamiya MiG-15bis has only been out for a while, this is the latest upgrade set for it. Comprising resin and etched brass it is number 48-4006

carp!' This is a very good set which will add yet more to an already very good kit. The set costs £17.25

Each of these sets can be obtained in specialist model shops or from the UK importer, H.G.Hannant Ltd. The prices quoted above are from Hannants.

My thanks to AeroMaster for the review samples.

Italian Subjects from EP Originals

This Italian company was mentioned a while ago in our News Update pages (See Vol 2 Iss 2 Page 71) and was included in the Italian Update (See Vol 2 Iss 4 Page 238-9), I am pleased to say that samples of the products have now been sent to us.

All of the products are resin and the first is a set of Italian Regia Aeronautica style oil drums in 1/72nd and 1/48th scales. Each set comprises five beautifully cast oil drums which are ready for use, no cutting or preparation is required. Now you may think, what's different about Italian oil drums? Well, that was my initial thought but having had a look at them they are different, for a start the access point is in the side not the top.



A set of oil drums applicable to Italian subjects is offered in 1/72nd and 1/48th scales by E.P. Original Models.

The first conversion set in this little selection is for the prototype and pre-series Fiat G.50. Offered in 1/48th scale the conversion is based on the Secter kit which



Based on the Hasegawa/Secter kit this conversion allows you to make the prototype and pre-production versions

has also been recently issued under the Hasegawa label. The conversion consists of two vac-formed canopies and fifteen resin parts. Also included are the resin formers for the vac-formed canopies so that you may use them to support the canopy as you cut it out. To convert the Hasegawa/Secter kit you will require the new engine cowl, forward upper decking, tail cone and different style undercarriage doors. The conversion will also require one of the new canopies. For the pre-production version you need the new upper decking, tail cone and undercarriage doors, as well as the correct canopy. It is noted that those aircraft operated by the Gruppo Sperimentale in the Spanish Civil War did not have undercarriage doors fitted. As an additional item you can also make 1st production batch machines. To do this all you have to change is the tail cone and undercarriage doors from the kit.

All of the resin parts are well cast and the

canopies are exceptionally clear and thin. You could make more than one of the options in the set if you can copy the tail cone shape, if not you are restricted to just one of the options.

The final offering is another conversion and it too is based on the Hasegawa/Secter Fiat G.50. This conversion however allows you to make a two-seat Fiat G.50B. The conversion consists of a beautifully clear vac-formed canopy, nine white metal and fourteen resin parts. Once again the resin former for the vac-formed canopy is included to ease the trimming procedure. The big difference in this set over the last is the sheer size of some of the parts because a two-seat conversion requires a new fuselage. This is achieved with a two-part casting, split vertically, of the fuselage and the cockpit area comes complete with all ribs and control quadrants etc. To convert the kit therefore you have a new fuselage which is detailed with a new floor, seats, bulkheads and instrument panels in resin plus control columns, rudder pedals and compass in white metal. The exterior of the new fuselage has two venturi tubes which are cast metal and a new engine bulkhead, onto which is fitted the engine from the kit, and a new engine cowl.

All of the resin parts are well cast with nice surface detail and no air bubbles visible. The detail achieved will be quite impressive and in this scale it should make an interesting addition to any collection.



Also based on the Hasegawa/Secter kit this conversion allows you to make the two-seat G.50B variant

Well having actually seen the products I can say that they are as good as they looked and I would recommend EP Original products to all. At present the company does not have a UK importer, although this may change in the future with this quality of product, however if you wish to contact them then write to:

E.P. Original Models, via Goito 24, 20098 S.Giuliano Milanese, Milan, ITALY

My thanks to EP Originals for the review samples and we will keep you up to date with regard to UK distribution as soon as we hear anything.

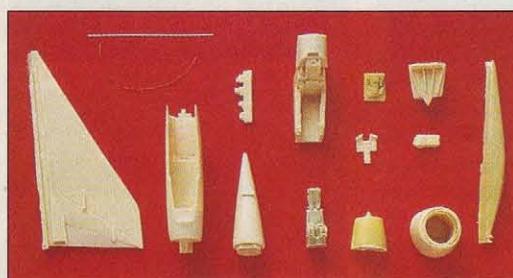
New Range from Belgium

The name of Plastic World Modelling Products may not be one you know, but you will once you have read this review about two of their latest detail and conversion sets.

Produced in Belgium this company makes resin conversions and the latest examples I have are both in 1/48th scale and are both based around the Heller Mirage III kit. The first is set 4810 and this is a Mirage V update set, comprising fourteen resin parts plus a length of plastic rod and brass wire. The conversion consists of a new cockpit section complete with an insert tub with separate ejection seat, instrument panel etc, new intakes, a completely new tail unit, new engine exhaust area, new ventral hook housing and a chaff-flare dispenser. The quality of these resin parts is very good indeed and the ejection seat would not look out of place displayed on its own, it is that good. Although there will be some major hacking of your Heller kit I think that the end result will be unusual and most attractive. If you want to go still further with

your Mirage this set can be used along with the Eduard etched update set (48-128).

The other conversion is for the Mirage V/MIRSIP and this upgrade consists of fifteen resin parts plus a length of plastic rod



The quality of this Mirage V update from PWMP is quite evident

and brass wire. The conversion is basically similar to the Mirage V upgrade mentioned above only you also get a set of forward canards, a ventral stake and a different style nose. Once again all of the resin pieces are very well cast and although there are areas of flash it is nothing too bad. The

cockpit insert detail is very good and there were no air bubbles visible in any of the components in either set. Once again this second conversion can also be used in conjunction with the Eduard etched detail set mentioned above.

Overall I think that both of these sets are well produced and well presented. It is good

interest and experience to work with the medium. Although I do not feel they would make a good project for the beginner I think that anyone with a modest amount of conversion work under their belt would have no trouble with these sets.

These and all other PWMP products can be obtained from Avia imports, see their



Based around the Mirage V set, this MIRSIP conversion will make an interesting addition to any modeller's collection

advert elsewhere for more details. Each one of the sets reviewed above costs £18.80 from Avia and if you want to know more about the entire PWMP range give them a ring.

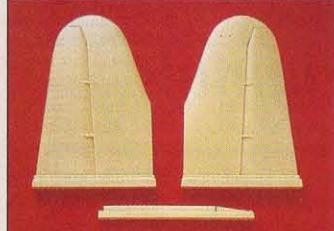
My thanks to Avia Imports for the review samples

Big Boeing from Paragon

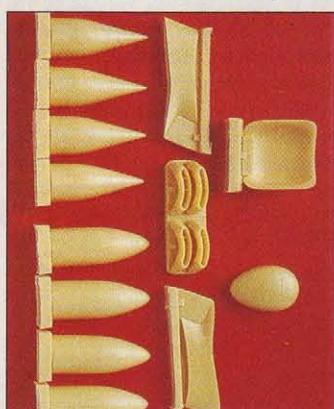
Mentioned in last month's look at Paragon's products (See Page 273) and my look at the Southern Expo (See Page 310-312) was this superb conversion for the Boeing B-50A/D.

Based on the Monogram 1/48th scale kit the conversion comes in two boxes, so you know you are in for a large number of resin components, and it's not until you look at the individual size of some of the pieces that you realise this is going to be a big, very big model!

The instruction sheet with this conversion starts by informing you that your first task will be to re-scribe all the panel lines. This is because the Monogram kit features raised lines and if you are going to go to all the effort and expense of making this conversion you may as well have some nice recessed panel lines. Having spent a few days scribing to your hearts content, you can start the conversion in earnest. The conversion consists of seventy resin parts and one vac-formed clear piece. The sheer size of a B-50 in quarter scale does mean that every one of the resin parts is about as big as a fighter in 1/72nd scale, OK maybe not that big at times. The piece which really turns your head, and the one at which point everyone who has seen this conversion says PHEW! is the replacement vertical tail unit. To give you some idea it is 12cm high by 8cm wide and that's big for one resin part. The conversion itself seems relatively straight forward and thanks to good illustrated instructions from the manufacturer anyone with experience in mixed media products and conversion work will have little trouble. Your first task is a bit of surgery and this consists of removing a

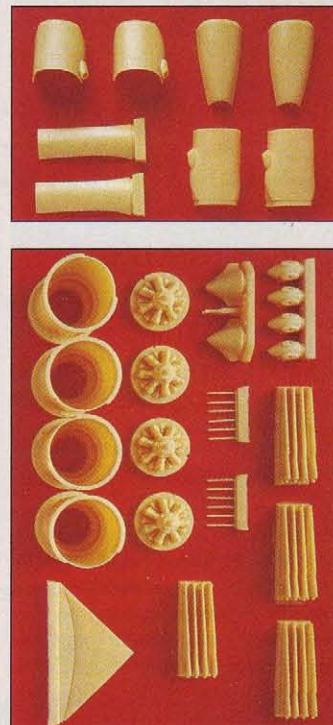


The sheer size and number of the parts offered in this new conversion by Paragon gives you some idea of what the finished model will be like, BIG!



portion from the rear upper section of each outer engine nacelle and both forward sections of the engine nacelles from the lower wing halves. Next comes chopping off the tail for that lovely big bit of replacement resin and then you can get going with assembly.

Most of the Monogram kit is retained although all four engine units and propellers



are replaced. The trailing edge of each wing between the engines is extended courtesy of a neat little resin insert and all the necessary extended engine nacelles for the bigger P&W R-4630 engines are beautifully cast in resin. The instructions include a scale outline for the refuelling receptacle and this has to be used to scribe the panel into the top of the fuselage just aft of the cockpit area. Only the B-50D carried drop tanks under the outer wing panels and these are included in the conversion. A new upper gun turret is included and all of the 0.5" machine gun

barrels offered in the kit should be replaced by the resin ones offered, as they are finer and have better surface detail. Don't miss out on part number 19, its position is shown in shaded form on the box top but it is not shaded on the instructions and you will be left with a large chunk of resin wondering where it goes (it goes between the bomb-bay doors by the way). Your final task with the B-50D version will be to replace the nose glazing for the vac-formed example in the conversion.

Overall this is a superb set, the size of the subject will of course put some off but all mad people like me will be going 'oh' and 'ah' just at the sight of such a beautiful thing. Once again the thing which sets this conversion up above any others is the quality of the engineering and the excellent casting. You will not find any air bubbles or surface imperfections in a Paragon set and this new one is no exception. Each time I see Paragon products I cannot believe just how good they are. To coin a phrase used many times by fellow modeller and out and out nutter Mitch Thompson, 'this is one hell of a sexy conversion' and it will certainly result in one sexy model.

If you like your models big or you are considering one conversion to go to town with then look no further than this little (sorry big) conversion from Paragon. If you want to know more about this or any other Paragon product contact them at:

Unit 10E, Folgate Road, North Walsham, Norfolk. NR28 0AJ Tel 01692 407577

My thanks to Paragon for the review sample and I wonder if I can get it built before that conversion for the Lincoln arrives in 1/48th scale?

Beaufort Update

The old FROG Bristol Beaufort was deficient in many areas as far as accuracy goes but the most prominent were the engines and nacelles which bore little resemblance to the real thing. Recently a batch of the old kits, once produced under the NOVO label and then by numerous sources in the USSR, was obtained by TASMAN Models with the intention of updating them with new detail and corrective parts and decals. The kit was recently released under the Tasman 'Update' series, although due to its very limited nature it would not be viable for one to be reviewed as they would be out of stock before the review was published. Having made all the

detail parts it was decided at an early stage that these parts should be offered separately for all those modellers who had FROG Beauforts in their 'loft insulation'.

What has resulted from this is a small pack of pieces in injected and vac-formed plastic. There is a new set of main wheels in injected plastic and there are correct engine nacelles in vac-formed plastic. Having done all that work it would be no good using the kit canopies and therefore the set is completed with a set of glazings including the turret in clear vac-formed plastic. The set also has the instruction sheet from the Upgrade kit and this is a wealth of



If you have a FROG Beaufort in the attic, but have never built it due to the inaccuracies, then this new update set from Tasman may be just what you have been waiting for.

information with lots of pictures from the aircraft manual including details of the undercarriage and cockpit interior. For this alone the set is worth having, but overall this will make your Beaufort just that little bit more accurate and therefore more acceptable to the critical modeller's eye!

At present I do not have a price for this set

but a conversation with any of the specialist shops which stock the Tasman range will hopefully shed light on this point.

Overall a neat little package which I can recommend to all. Go and sift through that loft insulation!

My thanks to Tasman for the review sample.

New Figures from Elan

Having had a quick look at these in last month's News Update pages (See Vol 2 Iss 5 Page 261), I will now have a more detailed examination.

All of the products are to 1/48th scale and there are four new sets on offer. The first is set number ELAN006 and it is entitled 'Any One for Cricket?'. This set consists of three figures, all RAF and each of them involved in a game of cricket. The first figure is a Flying Officer and he is the batsman. He is depicted standing, rather nonchalantly, resting on his bat. The second figure is a Flight Sergeant and he is the wicket keeper. He is depicted in the usual wicket keeper's crouched stance and he comes complete with an oil drum onto which you have to paint the stumps and bales. The final figure is a Pilot Officer and his is the bowler. He is standing, ball in hand, just about to start his run up. Each figure is finely cast with no air bubbles or surface imperfections visible. The batsman has his bat separate and the addition of the oil drum is a nice touch. This set will certainly add a lot to any diorama.

Set ELAN007 is entitled '3 RAF or RN Pilots 1942 to 1945' and this too is a three figure set. The first figure is a pilot and he is



ELAN07

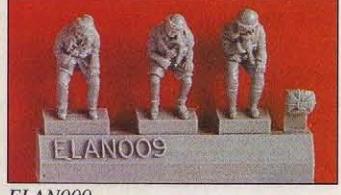
depicted standing with one hand in his pocket. This pilot is kitted out in full flying gear with C type helmet, Mk VIII goggles and a Mk I life jacket. The second figure is of an aircrew man and he is depicted holding a parachute pack. The final figure is cast with the option of RAF or RN heads. Depicted just standing with all his flying gear on, the figure can either have the RAF (forage cap) or RN (peaked cap) head fitted. There is also a separate parachute pack included with this set.

Set number ELAN008 is entitled 'Luftwaffe Ace & Ground Crew, 42-45' and this is another three figure set. The first figure is an Unteroffizier who is acting as the Ground controller. He is depicted wearing a standard junior NCO's uniform with a peaked cap and he is standing whilst holding a small flag in one hand. The second figure is a fighter pilot and he is cast to represent a Hauptmann. He is standing with his arms crossed and he is wearing his usual officer's uniform with peaked cap and over this is a non-official cream leather flying jacket complete with 'Iron Cross'. The final figure is a ground crewman and he is depicted painting a victory mark on the rudder of the Hauptmann's aircraft. He has a paint brush in one hand and a tin of paint in the other.

The final set is ELAN009 and this consists of three seated pilot figures for the 1939-45 period. The first is an early war period Pilot officer depicted in RAF Blue/Grey jacket and trousers with a type B Flying Helmet, Type D oxygen mask and MK IVa goggles. The second figure is a pilot of the Mediterranean or Far East operational environment and he is therefore depicted in Tropical dress complete with shorts. The final figure is a mid to late war period pilot who is dressed in a one-piece Irvin leather flying suit with a Type C Flying Helmet, Mk G oxygen mask and Mk VIII



ELAN08



ELAN09

goggles. Each figure is superbly cast and the set contains a separate parachute pack.

Overall these are all excellent sets and each is well worth having. The casting is excellent and the detail and facial characterisation is superb. Each of the above sets is highly recommended and they cost £5.95 plus P&P each. They can be obtained from specialist model shops or direct from the manufacturer at:

Elan Miniatures, 41, Broadway,
Chilton Polden, Somerset. TA7 9DJ

My thanks to Elan Miniatures for the review samples.

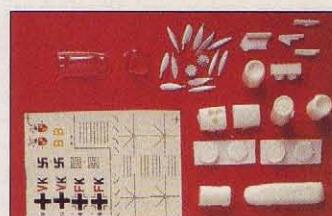
JU 88S/T Conversion by Toad

Toad Resin have been away from the scene for a bit, or so it has seemed, however lately they have returned with a vengeance and this new conversion for the Junkers Ju 88 is a welcome departure from the 'Luftwaffe 46' projects they usually produce in kit form.

Packed in the standard Toad Resin red box, the kit comprises of nineteen resin parts, three vac-formed clear canopies, thirteen metal parts and a decal sheet. The resin looks all the world like some form of confectionery, as it is a translucent white colour, not at all what we have become accustomed to. There are enough pieces in this set to make up both the T and S

versions of the Ju 88 and the set is designed for use with the excellent kit from Italeri. From this set you can make up the S-0 (vac-formed canopy, nosecap and BMW 801D engines), the S-1 (same as S-0), S-2 (as per S-0 but also using the bulged bomb-bay and BMW 801TJ engines) and the S-3 (As per S-0 but using Jumo engines). In the T series you can make the T-1 using the vac-formed nose-cap, BMW engines and an insert in the lower fuselage to represent ventral camera ports or the T-3 which is similar except that it uses the JUMO powerplants.

As I said at the beginning this set comes with a decal sheet and on it you get options



The main components of the new Toad conversion for the Ju 88 S and T series

for the S-1, S-3, T-1 and T-3. The S-0 and S-2 are very camera-shy types and the manufacturer would like to hear from anyone who has photographic evidence of these two types in operational use. These decals look quite nice and are all in register, your only problem will be that they are printed onto a solid high-gloss carrier film,

so you will have to remove each image (codes etc) one at a time. Although this should not cause too much trouble it will make the task a little time consuming.

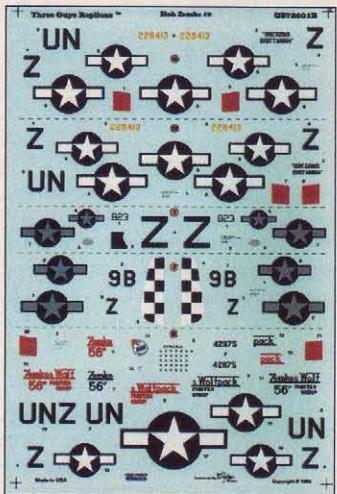
Overall this is an good conversion set and although the resin parts are quite crudely cast and will therefore require quite a lot of preparation, I do not feel that this is beyond those modellers at whom this sort of conversion is aimed. I am afraid that I do not have a price for the set at present so if you are interested in this, or any other products in the Toad resin range, contact them at;

152 Godstone Road, Caterham,
Surrey. CR3 6RB

My thanks to Toad Resin for the review sample.

Decals

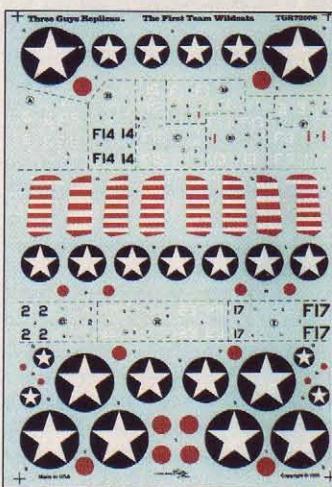
Three Guys Selection



The late Col. Hubert 'Hub' Zemke's machines are celebrated on this special sheet from Three Guys Replicas

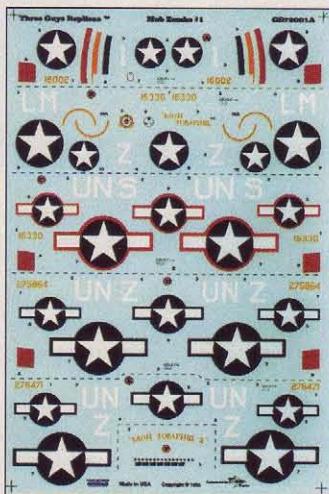
The American company of Three Guys Replicas may be familiar to many of you whilst others think, 'who?'. They have been going a while now and they produce decals similar in style to those of Third Group, which is not surprising when you consider that they are printed by the same firm, namely Microscale. Some of the most recent releases have made their way to us thanks to H.G.Hannant Ltd.

There are four sheets in each scale, 1/72nd and 1/48th, so I will deal with those in 1/72nd first. The first sheet is in fact a special which is dedicated to the late Colonel Hubert (Hub) Zemke. The sheet offers you colour schemes for no less than ten aircraft which this man flew during his career. The majority of them are P-47D Razorback Thunderbolts, but there is a P-38 and a P-51D. Your options are;



Early Wildcat operations are dealt with on sheet TGR72006

• P-47B 41-6002, 61st FS, 56th FG, Bridgeport Municipal Airport, Connecticut, Sept-Nov 1942. This machine is Olive Drab (OD) over Neutral Grey (NG) with Medium Green (MG) blotches on the wing and tail. Red, Yellow and Blue command stripes are carried around the rear fuselage and the cowl ring is also segmented in the same colours.



• P-47C-5-RE 41-6330, 62nd FS, 56th FG, Horsham St Faith, June 1943. Once again OD over NG with white ID bands on the cowl and all tail surfaces.

• P-47C-5-RE 41-6330, 63rd FS, 56th FG, Halesworth, Sept 1943. This machine is identical to the previous option although red surrounds have been added to all the national insignia.

• P-47D-15-RE 42-75864, 63rd FS, Halesworth, February 1944. Once again OD over NG although the ID bands had been removed by this time. The forward engine cowl was now painted Insignia Blue.

• P-47D-20-RE 42-76471, 63rd FS, Boxted, March-May 1944. This machine is in the same scheme as the previous option although the engine cowl was red.

• P-47D. This is a fictitious representation of a 63rd FS, 56th FG machine as depicted in a watercolour painting. The machine carries the nose art 'Moy Tovarishch' and is painted in Grey (RAF Ocean Grey?) and Green (RAF Dark Green?) over natural metal with a red cowl and white ID bands around the tail surfaces.

• P-47D-25-RE 42-26413, 63rd FS, 56th FG, Boxted 1944. This aircraft is RAF Ocean Grey and Dark Green over natural metal. The entire upper fuselage spine is Olive Drab and the engine cowl is red.

• P-47D-25-RE 42-26413. This machine is in the same scheme as the previous option although invasion stripes have been added to the fuselage and wings.

• P-38J-15-LO 43-28823, 435th FS, 479th FG, August 1944. This machine is natural metal overall with anti-dazzle Olive Drab panels on the nose and inboard engine panels. Invasion stripes are carried around the lower surfaces of each tail boom.

• P-51D-10-NA 44-14351, 436th FS, 479th FG, Wattisham, October 1944. This Mustang is Natural Metal overall with an Olive Drab anti-dazzle panel and invasion stripes on the lower fuselage. This machine's markings are listed as 'provisional' by the manufacturer and it is interesting to note that the national

insignia have grey centres.

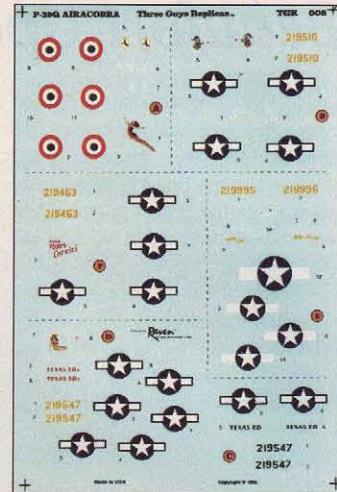
• P-47M-1-RE 44-21175, 63rd FS, 56th FG, Boxted, May 1945. Finished in Natural Metal overall with Olive Drab upper decking, red forward cowl and a bright blue rudder. This P-47 carried the P-47N style dorsal fin.

The next sheet is for the Grumman Wildcat. Numbered TGR72006 the sheet is entitled 'First team Wildcats' and it offers you schemes for nine machines. These options are:

• F4F-3A BuNo 3916, VF-6. This machine has Blue Grey upper and Light Grey lower surfaces. This is the machine flown by ENS James. G. Daniels into Pearl Harbour after dark on the 7th December 1941.

• F4F-3A BuNo 3914, VF-6. This machine is in the same scheme as the previous option and this is the aircraft to achieve the first aerial victory by a USN pilot in WWII.

• F4F-3A BuNo 4031, VF-3. Again another machine in the same scheme as the previous option, this machine was flown by Lt. Edward.H 'Butch' O'Hare on his Medal of Honour mission on the 20th February 1942 near Rabaul.



There are some unusual schemes for the P-39Q Airacobra offered on sheet TGR72008

Battle of Midway on the 4th June 1942.

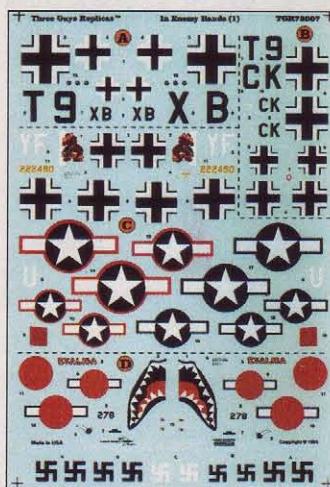
• F4F-4 BuNo 5089 of VF-8, flown by Ens Stephen.W.Groves at Midway in 1942. This pilot was shot down and killed after shooting down a D3A1 which was attacking the USS Yorktown.

All bar three of these options carry red and white striped rudders.

We stay with an American type for the next sheet as it deals with the Bell P-39Q Airacobra. This sheet, number TGR72008, offers you options for six machines and they are;

• S/No Unknown operated by 10o Gruppo at Galatina Airfield near Lecce in 1944. This aircraft is Olive Drab (OD) over Neutral Grey (NG) and it has a red spinner.

• 'Sad Sack' 42-19510 flown by Capt James Van Nada. Both early and late markings are included for this 72nd FS, 7th Fighter Command (FC) machine which is finished in OD over NG.



'What a lovely selection of 'different' schemes for American types are offered on TGR72007. Evaluation of enemy machines is an area much neglected by decal manufacturers, what about some 'Air-Min' examples next?'

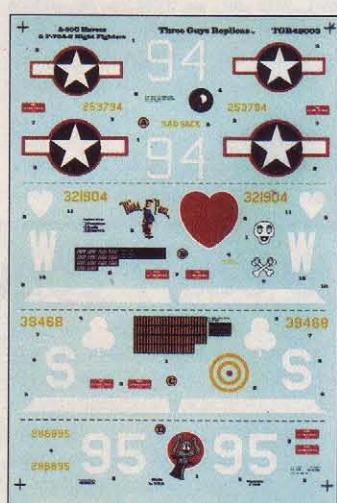
• F4F-3A of VF-3. Once again a Blue Grey/Light Grey machine this aircraft was flown by LCdr John.S 'Jimmy' Thatch, the commander of VF-3 in February 1942.

• F4F-3A of VF-3 once again in the same scheme as all the previous options. This is the aircraft flown by 'Jimmy' Thatch on the same mission as 'Butch' O'Hare won his medal.

• F4F-3 of VF-3. Again in the now familiar scheme, this is the aircraft flown by 'Butch' O'Hare for publicity photographs in Hawaii, April 1942.

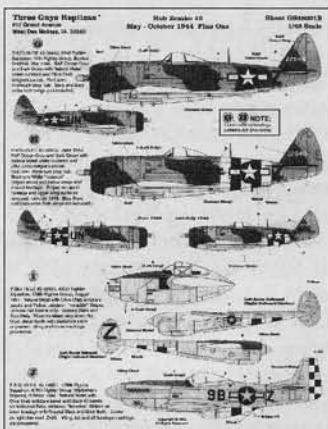
• F4F-3 BuNo 2531 of VF-42. This machine was flown by LtG E.Scott McCuskey when he scored an aerial victory at the Battle of the Coral Sea on the 8th May 1942.

• F4F-4 BuNo 5093 of VF-3. This is the machine in which 'Jimmy' Thatch used his 'Thatch Weave' manoeuvre in combat, resulting in the downing of three Zeros at the



With the recent release of some many excellent Havoc/Boston kits by AMT it is not surprising to find decal sheets for them. This sheet, TGR48003, offers schemes for the P-70 and A-20G versions

• 'Texas Ed' 42-19547 of the 46th FS, 7th FC flown by Flight Officer Felix Scott in 1943. This machine is in a unique scheme of



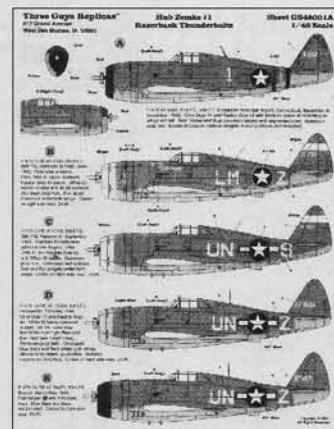
The special sheet for 'Hub' Zemke is also offered in 1/48th scale as GS48001

Engineers Tan No 3 (FS 33448) over Light Blue (FS 35550).

- 'Texas Ed II' flown by Felix Scott in early 1944. This later version of Scott's machine was repainted OD over the original Light Blue.
- 'Snooks 2nd' 42-19510 of the 82nd TRS flown by Lt. William Shomo in May 1943. This machine is OD over NG with the tail section and wing leading edges painted white. The spinner is yellow.
- 'Annie Tojo's Lorelei' 42-19463. This machine is OD over NG.

The final option in this 1/72nd scale selection sees us change sides as it deals with captured American types evaluated by the Luftwaffe. Sheet number TGR72007 is entitled 'In Enemy Hands (1)' and it offers you schemes for four aircraft. These options are:

- P-38G flown by 2. Versuchsvorband der Ob.d.L which was better known as Zirkus Rosarius (Rosarius' Flying Circus). This aircraft was flown to many Luftwaffe bases for DACM (Dissimilar Air Combat Manoeuvring) training in late 1943. This aircraft is RLM 70 on top with RLM 04 (Yellow) lower surfaces and tail units
- P-51B captured in early 1944 and flown by Zirkus Rosarius and based at Hannover/Wunstorf. This machine is also painted RLM 70/04, with the entire tail area and spinner also being yellow. This machine may well have been later finished in natural metal, although it is possible that this was another P-51B carrying the same codes.



The special sheet for 'Hub' Zemke is also offered in 1/48th scale as GS48001

- P-47D-2-RA 42-22490 flown by 2nd Lt. William E. Roach, 358th FS, 353rd FG. This machine was landed in error by the pilot at a Luftwaffe base in France in 1943. This machine was passed to the Luftwaffe Test and research centre at Rechlin and remained in its USAF colour and markings of Olive Drab over Neutral Grey coded YF-U. The national insignia was replaced with German crosses and the spinner and entire engine cowl, less access panel with nose art 'Beetle'.



Already seen in 1/72nd, this is the 1/48th scale version of the captured aircraft sheet (TGR4809)

and the rudder were painted RLM 04. This decal sheet does also include the original USAF markings for this machine.

- P-51C, reportedly flown by a pilot called Strawbridge of the 51st FG, was captured

intact in China in 1944 and flown to the Japanese Army Air Inspection centre at what is now Yokota Air Base. This machine was called 'Eveline', it carried a sharksmouth and it was natural metal with an Olive Drab anti-dazzle panel. Only the centre of the national insignia were over painted with Hinomarus, with all other insignia retained. Photographic evidence does not include the full wing markings and therefore the manufacturer has included extra Hinomarus should you wish to add these to the wings.

It will come as no real surprise to find that the 1/48th scale selection are just scaled up from 1/72nd. Therefore there are four sheets and I will deal with each only where it differs from the 1/72nd scale options.

The first sheet is GS48001 and this is the special commemorative set for the aircraft of Hubert 'Hub' Zemke. All eleven options on the 1/72nd scale sheet are included on this larger version

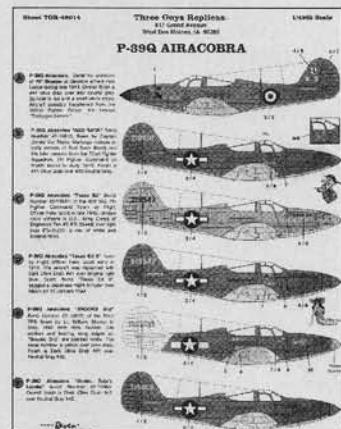
Sheet number TGR48003 is the only sheet in this selection which is not scaled up from the 1/72nd scale offering. It is entitled 'A-20G Havocs & P-70A-2 Night Fighters' and it offers you schemes for four machines. These options are:

- P-70A-2 42-53794 'Sad Sack', 348th Night Fighter Squadron, Orlando AAF, Florida, 1943. This machine is Olive Drab over Neutral Grey with gloss black lower wing and tailplanes, nacelles, rudder and fin leading edge.
- A-20G 43-21904 'Miss Pam' of the 388th BS, 312th BG based at Hollandia, New Guinea in 1944. This is another Olive Drab (OD) over Neutral Grey (NG) machine.
- A-20G 43-9468 'Old S' of the 386th BS, 312th BG based at Floridablanca Airfield in the Philippines in early 1945. This machine was flown by Col. R.H. Strauss, the 312th BG Commander and it was OD over NG with what is either freshly painted Olive Drab or Medium Green on the rudder.
- P-70A-2 42-86895 of the 348th Night Fighter Squadron based at Hammer Field, California in 1944. This aircraft was OD over NG and it carried extra antenna on the upper fuselage.

Sheet number TGR48009 is a scaled up version of TGR72007 and it gives you three of the options from the smaller sheet. The

P-38G, P-47D-2-RA and the P-51C from the 1/72nd scale version are included, all you miss out on is the P-51B operated by Zirkus Rosarius.

The final offering in this scale is sheet number TGR48014 and this is for the Bell P-39Q Airacobra. Once again this is scaled up from the 1/72nd scale sheet, TGR72008 and you get all six options offered on the smaller scale version.



The P-39Q is covered in both 1/72nd and 1/48th scales, this is the latter version (TGR48014)

Overall this is another excellent selection from this company. With the decals being produced by Microscale you know what quality they are and the instructions do include lots of information and diagrams to ensure that there are no areas you are left feeling uncertain about. All of the sheets reviewed above bar the special sheet for Zemke's machines are single sheets, whilst that special is a two sheet set. The price for each is:

GS72001	£10.95
TGR72006	£4.95
TGR72007	£4.95
TGR72008	£4.95
GS48001	£10.95
TGR48003	£4.95
TGR48009	£4.95
TGR48014	£4.95

All the prices quoted are from H.G.Hannant Ltd.

My thanks to Hannants for the review samples.

cowl, spinner and rudder are white.

• Bf 109F-4 of 8./JG 54 flown by Staffelkapitän Oblt Max-Helmut Ostermann during the winter of 1941-42 in Russia. This machine is listed as having RLM 71 upper surfaces with RLM 76 underneath. It is more likely that this machine was RLM 70/71 on top. The entire upper surface bar the yellow fuselage band has had white distemper applied over it. The lower wing tips will also be yellow (RLM 04).

• Bf 109F-4 of 1./JG 54 flown by Ltn Walter Nowotny in July 1942 on the Russian Front. This machine is odd in having a splinter pattern of RLM 02 and 70 over RLM 79. It is most likely that the lower engine cowl is

RLM 04 and the only disappointing thing about the decals is that the manufacturer has forgotten to include the thirty white bars for the rudder.

• Bf 109F-2 of 9./JG 2 flown by the Staffelkapitän, Oblt Röders in the summer of 1942 from Caen, France. This machine is RLM 74/75 over 76 and the entire nose, spinner and rudder assemblies are all painted yellow (RLM 04).

• Bf 109G-6 of 9./JG 3 during April 1944 in Germany. This machine is RLM 74/75 over RLM 76 and although the instructions list RLM 83, possibly as a fuselage side mottling colour, I feel you would be far safer with the Dark Green of RLM 82 for this purpose.

New Sets from Intech

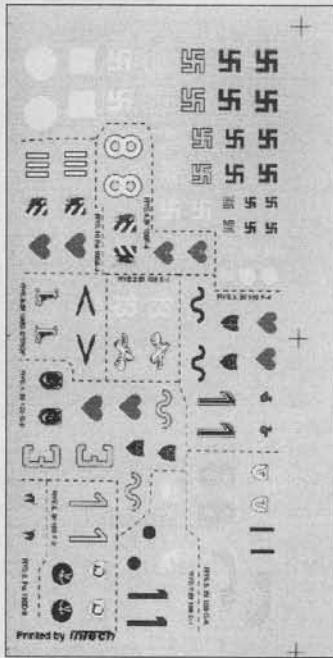
The idea of decals complete with a booklet instead of a simple instruction sheet is nothing new, although usually this combination does cost considerably more than a simple decal sheet. The latest releases from the Polish company of InTech are two small booklet and decal sheet combinations.

The first is for Luftwaffe subjects and it is offered in 1/72nd scale. The booklet is twelve pages with a card (colour) cover, on the inside of which is taped the decal sheet. The sheet itself is 17.5cm x 9cm and this offers you schemes for ten aircraft. The options are

therefore:

- Bf 109G-2 of 9./JG 54, Leningrad 1942. This machine is RLM 70/02 over RLM 76, although I would personally prefer RLM 65. The lower engine cowl and fuselage band are RLM 04 and the spinner is segmented in yellow and black.
- Bf 109E-1 of 7./JG 54 flown by Utz Arno Zimmerman during October 1940. This machine is RLM 71/02 over RLM 65 with a heavy mottle of the upper surface colours down each fuselage side. The upper engine cowl is yellow and it looks as if the lower

- Bf 109E-1 of 2/JG 77 flown by Staffelkapitän Haupt Hannes Trautloft from Poland in the Summer of 1939. This aircraft is RLM 70/71 over RLM 65 and the upper colours are applied in a solid splinter pattern which extends down the fuselage sides.



The first in a new series of book/decals sets is this one in 1/72nd scale. It deals with Luftwaffe types

- Bf 109G-2/Trop of Stab.II/JG 77, flown by Gruppen-Adjutant Haupt Heinz-Edgar Berres from Tunisia in the Spring of 1944. This machine is RLM 79 over RLM 78 with a mottle of RLM 80 on the upper surface. The fuselage band and lower wing tips are white

and the spinner is 1/3rd white, 2/3rd black.

- Focke-Wulf Fw 190D-9 flown by Hagen Forster in 1945. This machine is RLM 81/75 on the fuselage spine with RLM 81/83 in a splinter pattern on the wings and RLM 76 underneath. The tail is lightly mottled in RLM 75 and the aircraft carries the red/yellow tail bands of JG 301.

- Focke-Wulf Fw 190A-4 of Jabo.Stab.I/JG 54 in Russia in the Spring of 1943. This machine is again listed as RLM 71/02 over RLM 76 although I suspect that the lighter (RLM 02?) of the upper colours is in fact a field mixed version. This aircraft carries a yellow fuselage band behind the national insignia, a yellow lower engine cowl, base of the rudder and lower wing tips.

Overall this is a nice decal set although the text is of little use to you as 90% of it is in Polish. All the illustrations look strangely familiar and the small amount of text given in English does not fully illustrate the particular colours of the depicted topics.

The other offering is entitled 'Polish Air Force Part 1' and it is offered in 1/48th scale. This version only has a couple of photographs in the centre pages although it is a little better on the descriptive side as there is a short narrative for each option. The aircraft depicted in this set are:

- MiG-23MF 'Red 012' of the 2nd Flight, 1st Sqn, 28th Air Fighter Regiment, based at Slupsk in 1991. This machine is Dark Green (FS 34097), Light Green (FS 34227) and Brown (FS 30140) over Light Blue (FS 35526).
- TS-11 Iskra (Spark) 'Red 1802' of the 2nd Sqn of the 7th Bomber-Recce Air Regiment based at Powidz in 1992. This aircraft is natural aluminium overall with a red tip to the

fin and a Dark Grey nose cone.

- MiG-21bis 'Red 8880' of the 1st sqn (Sioux Squadron), 34th Fighter Air Regiment, Polish Navy based at Gdynia in 1995. This aircraft is aluminium overall with die-electric



The other new book/decal set from InTech is for Polish Air Force machines and it is offered in 1/48th scale

panels in Green (FS 34138).

- Mi-24W, 'White 730' of the 3rd Sqn, 56th Combat Helicopter Regiment based at Inowroclaw in 1991. This helicopter is Grey/Green (FS 24583) and Green (FS 24258) over Blue (FS 25526). The tail rotors are Grey/Blue (FS 25488) and the main

rotors are Dark Green (FS 34095).

- MiG-29 A, 'Red 111' of the 1st Sqn, 1st Fighter Air Regiment based at Mińsk Mazowiecki in 1991. This aircraft is Grey (FS 26373) overall with irregular patches of Grey/Green (FS 35352) on top. The electric panels are Dark Grey (FS 16187) and the anti-dazzle panel is matt black.

- MiG-21 PF, 'Red 0615' from the 2nd Sqn, 1st Fighter Air Regiment once again at Mińsk Mazowiecki in 1992. This machine is in the same colour scheme as the previous option.

- MiG-21 MF, 'Red 8015' of the 1st Sqn, 62nd Fighter Air Regiment based at Poznań-Krzesiny in 1992. This aircraft is overall natural metal.

- MiG-21 R, 'Red 1705' of the 2nd Sqn, 32nd Reconnaissance Air Regiment based at Sochaczew in 1992. This machine is natural aluminium overall with a dark grey panel on the fin tip.

- An-2, 'White 1318' from the 2nd Sqn of the 7th Special Air Regiment, Polish Navy based at Siemirowiec in 1992. This machine is Light Blue (FS 25414) underneath with Dark Olive Green (FS 34092), Light Green (FS 34545) and Light Grey-Green (FS 34424) on top.

This is a vastly improved product from the first offering as there is a good photograph for each option and the text nicely defines the camouflage applied and even ties the colours in to the Federal Standard.

Both of these sets can be highly recommended and at £3.99 each (£4.50 inc P&P) they certainly seem to offer value for money. If you are interested in these, contact The Turntable model shop for more details.

My thanks to The Turntable model shop for the review samples.

Golden Hawk by Leading Edge

Mentioned in the News Update pages last month (Page 260) was this recent release from Canadian decal manufacturer, Leading Edge. It deals with the Canadair Sabre Mk.6 which were used by the Canadian Air Forces 'Golden Hawks' display team.

This new set is in 1/32nd scale and is therefore applicable to the Hasegawa kit. Offering the scheme used during the 1962 and 1963 seasons the set consists of one large decal sheet containing most of the images and an additional smaller one with the large 'GH' logo carried on the tail of aircraft number 23651 during the 1963 season. As well as decals the set also comes with three resin parts which are specific to the Golden Hawk's Sabre. These are two intakes for the lower edge of each fuselage side and a large ventral antenna situated directly below the cockpit.

Being in such a large scale the decals are bold and clear and all of the complex images were perfectly in register. The set comes with two instruction sheets. One depicts the colour scheme and position of all the decals and resin parts and the other has extracts from an official manual which shows sidewall and



The quality of the images and the density of colour on this sheet is most impressive

instrument panel details as well as a good drawing of the ejection seat fitted to the type.

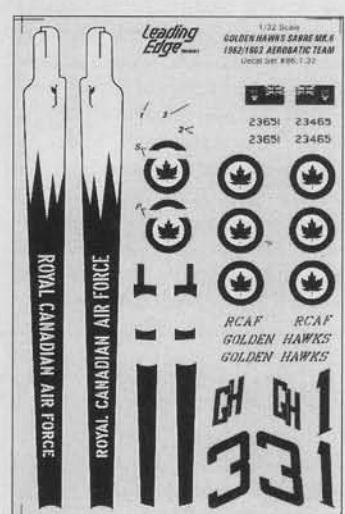
To build the type from the Hasegawa kit will require some modification to the kit and this is indicated on the instruction sheet. The major task is to shorten the wingspan and this is achieved by removing a portion near the

tip. This is well illustrated on the instruction sheet and should prove little trouble to most modellers.

Your options on the sheet are for two machines from 1962 and one from 1963. The two 1962 options are numbers 23465 and 23651. These machines are basically identical bar the numbers 3 and 1 on the tail of each respectively. The third option is machine number 23651 during the 1963 season and this machine carries the 'GH' logo on the vertical tail surface instead of the numbers seen on the 1962 machines. The overall colour scheme was officially Sheffield Luxor Pale Gold and I suspect that you will have to do a bit of paint mixing to create that colour. The only good point is that the header card for the sheet includes a nice full colour shot of one of the machines and I suspect you should be able to get a good match using that as a basis.

Overall this is another superb product from Leading Edge and it only leaves me with one problem, can I get away with a 1/32nd scale model in the collection?

All of the Leading Edge range is now



Three options are offered on this sheet (No 86.1.32)

exclusively imported into the UK by H.G.Hannant Ltd and if you want to know more about this or any other of the Leading Edge range you should contact them on 01502 517444. The price for this new sheet from this source is £5.50.

My thanks to Leading Edge for the review sample.

Karas Selection from Hitkit

The PZL P-23 Karas is one of those aircraft which has only been covered in decal form a couple of times and with the excellent Heller kit due for re-issue by SMER it is no surprise to find a selection of decals being offered for it from a Polish company.

Many of you may well have come across this company's excellent Ansaldo A.1 kit in 1/72nd scale, but if you have not, Hitkit produce kits, decals and accessory sets mainly in 1/72nd scale. The topics on the whole seem to be relevant to Polish operations although some WWI types have recently been announced (See New Update).

The latest decal sheet is for the P-23 and there are no fewer than ten options on the sheet. These options are:

- PZL-23B, No 9 of 12 Recce-Bomber flight of the 1st Air Regiment, 1938-39. This machine is in the standard scheme of Khaki (FS 20118) on top and Light Blue-Grey (FS 25526) underneath. The machine carries the number 'white N112' under the wings although the military serial number is not known.
- PZL-23B, No 7 of the 12 Recce-Bomber flight of the 1st Air Regiment. This machine is in the same scheme as option one although the underwing number is unknown.
- PZL-23A, No 2 of the Deblin Aviation



Lots of colourful unit badges are included on this new sheet for the P-23 by Hitkit.

Cadets School. Once again the standard colour scheme is used and the underwing number is 'D26'.

- PZL-23B, No D1 of the 22 Light Recce-Bomber Flight of the 2nd Air Regiment. This unit was incorporated on the 1st September 1939 in the II Bomber Squadron to become the 22 Light Bomber Flight. This machine carries 'K98' under the wings and has a military serial number 44.86.

• PZL-23B, No 4 of the 21 Recce-Bomber flight of the 2nd Air Regiment. This machine carries the number 'K85' (black) and the military serial number 44.61.

• PZL-23B, No 1 of the 55 recce-Bomber Flight of the 5th Air Regiment which was incorporated as the 55th self-dependant Light Bomber Flight in the Bomber Brigade. This machine is numbered 'C146' (black) and carries the military serial number 44.102.

• PZL-23B, No 6 of the 41st Recce-Bomber Flight, 4th Air Regiment.

• PZL-23B, No 8 of the 41st Recce-Bomber Flight, 4th Air Regiment.

• PZL-23B, No 6 of the 42nd Recce-Bomber Flight, 4th Air Regiment which became the 41st Recce Flight of the air force of the 'Pomer' Army. Underwing number is 'T' 05 (black).

• PZL-23A, No 5. This machine carried no unit insignia as it is depicted as one of the first PZL P-23's delivered.

Each of the options carries the same overall camouflage scheme as option one and the instructions do include full details of all the other colours applied to the type as well as notes on stencils and markings. Eight of the options on this sheet carry large and colourful unit badges on the fuselage decking between the radio operator's and rear gunner's positions. The manufacturer does note that since the first issue of the

sheet there has been some feedback which disputes the colour of background on three of the unit badges depicted on the sheet. To rectify this the manufacturer has removed the backing colour from those insignia and has therefore left it up to you to choose and then apply by hand. As far as the manufacturer is concerned all the badges had a light blue background.

All of the images are shiny and each batch of insignia are grouped together so you will have to remove each individually. The serial numbers and military number will have to be made up from the stock of numbers and letters supplied to the correct scale and colours which are included on the sheet. As far as national insignia goes there is only one complete set so if you wish to do more you will have to find these from another source.

This is an excellent sheet from Hitkit and one which is most useful. I have tried some of the decals out and found them to be of good quality. I would not advise using a strong decal solvent on them as they tend to curl up quite well. It is nice to at last have some alternative schemes for the P-23 Karas kit.

If you want to know more about any of the Hitkit products you should contact their UK importer, H.G.Hannant Ltd for more details.

My thanks to Hitkit for the review sample.

What's New AeroMaster?

It has been a month now since the last little look at the most recent offerings from this prolific decal manufacturer and there are quite a few new sheets about, all of which are in 1/48th scale (see page 350 for pics).

The topics covered are varied and for a change a 1950's jet is the subject of a set of three sheets.

There are twelve sheets in all so let's get going. The first sheet is number 48-220 and it is entitled 'Hungarian Air Force Pt.I'. The sheet offers options for four Messerschmitt Bf 109's and they are:

- Bf 109G-14AS operated by the 101/3 Fighter-Bomber Squadron in April 1945. This machine is believed to be in an RLM 82/75 upper and RLM 76 lower colour scheme. It has a yellow (04) nose band, rudder and lower wing tips.

- Bf 109F-4 of the 5/1 'Puma' Squadron operating in the Soviet Union in 1943. This machine is RLM 74/75 on top and RLM 76 underneath. It has a yellow fuselage band and lower wing tips and the tail and rudder are striped in the Hungarian national colours of red, white and green.

- Bf 109G-6 of the 5/2 Fighter Squadron in 1943. This machine is RLM 74/75/76 with a yellow spinner, lower engine cowls, fuselage band, rudder and lower wing tips. The swastika on the tail is partially painted out on this machine.

- Bf 109F-4 of the 1/1 Fighter-Bomber

Squadron operating on the Eastern Front in 1943. Once again the RLM 74/75/76 scheme is evident although this machine has received the winter white distemper on the upper surfaces. The spinner was originally yellow and this has been made into a spiral with the application of the distemper. The fuselage band is also yellow and it has not been obscured by the distemper. The tail and rudder is once again in the red, white and green national colours.

This is an excellent sheet and as well as the usual single sheet you also get two examples of the stencil sheets (148-007) for the Bf 109F/G/K so you can make up all the options on the sheet. This is part one of a two part set and it is followed by sheet 48-221 (Pt.II), although I am afraid I do not have this one to review so cannot pass comment on its contents.

Next is sheet 48-222 which is entitled 'Operation Bodenplatte Pt.I'. There are five options on the sheet and they are:

- Bf 109G-14, M/Nr 462892 operated by 16/JG 53 on the 1st January 1945. This aircraft was shot down by the 90th Inf Div, US Army near Halstroff and the pilot was taken prisoner. The aircraft is RLM 81/82 on top with RLM 76 underneath. The fuselage sides are covered in dense areas of RLM 81 and 83 and this aircraft does not have any undercarriage doors fitted.

- Bf 109G-14 of 12/JG 53 on the 1st January

1945. This aircraft is RLM 81/83 on top and RLM 76 underneath. The fuselage sides are mottled in circular spots of RLM 83 and the lower engine cowl is yellow. The spinner is black with a white spiral.

- Fw 190A-9, W/Nr 980219 of 2/JG1, flown by Wilhelm Ade. Surprisingly for a Fw 190 this machine is RLM 82/83 over RLM 76. The mottled effect is quite dense at the front of the fuselage getting lighter as it moves towards the tail. The spinner is black with a white ring and the propeller blades have been crudely painted with white stripes.

- Fw 190A-8/R8, W/Nr 681497 of 5/JG 4, flown by Gefreiter Walter Wagner. This aircraft is RLM 74/75 over RLM 76 and as the machine carries a unit badge from another group on the engine cowl it is likely that it had a engine change before it crash landed at St Trond.

- Fw 190D-9, W/Nr 281617 of an unknown unit. This machine is RLM 82/83 over RLM 76 and it carried an AB250 cluster bomb on an ETC 504 weapons rack under the fuselage centre line.

This is a two decal sheet set and the second sheet is approximately 2/3rd the size of the first. This second sheet contains all the national insignia for the aircraft plus sets of stencils for all the options on the sheet. As a bonus the sheet also has two each of the Messerschmitt and Focke-Wulf company logos on it.

This is another excellent sheet and one which is followed by a second part (48-223) which is once again one which I do not have,

so I cannot pass comment on its contents.

The next sheet is one with a real history to it and one which I feel is long overdue. In WWII the USAAC and other military organisations had strict racial segregation policies and under strong pressure from the N.A.A.C.P, Congress and the White House the War Department set up what it called the 'Noble Experiment', this being a scheme to train negro Americans to fly and service aircraft for operational requirements. The initial base was Tuskegee Army Air School in Alabama and in all some 992 pilots graduated from there. Four hundred and fifty black fighter pilots served in North Africa, Sicily and Europe and they never lost a single bomber they were escorting to enemy interdiction. Known as the 'Black Redtail Angels' to the American bomber crews and the 'Schwarze Vogelmenschen' (Black Birdmen) to the Germans the Tuskegee Airmen were a dedicated group and thanks to AeroMaster you can now add a selection of these pilot's machines to your collection.

The sheet is entitled 'The Spoofwaffe' Tuskegee Airmen' (No 48-224) and it offers you schemes for five machines. These are:

- P-51B/C 'Topper III' flown by Capt Ed. Toppins of the 99th FS, 332nd FG. This machine is Duraluminium overall with a black anti-dazzle panel. The extreme tip of the engine cowls is black and white checks and the spinner and tail are insignia red. The wings carry 15" yellow bands inboard and 10" bands outboard as theatre markings.

- P-51D 'Bunnie' flown by Capt.

Roscoe.C.Brown, CO of the 100th FS, 332nd FG. This machine is Duraluminium overall with an Olive Drab anti-dazzle panel and a red extreme tip to the engine cowls. The spinner, tail and wing tips are also Insignia Red and 15" yellow theatre bands are carried around each wing.

• P-51C 'Inca the Macon Belle' flown by Ltn. Lee 'Buddy' Archer, 302nd FS, 332nd FG. Once again this machine is similar to option 2 although the extreme tip of the engine cowl is in red and yellow checks and the wings have 18" yellow theatre bands about mid-span.

• P-51D 'Little Freddie' flown by Ltn. Freddie Hutchins, 302nd FS, 332nd FG. This machine is Duraluminium overall with an Olive Drab anti-dazzle panel and Insignia Red spinner, tail and wing tips. 15" yellow theatre bands were carried inboard around each wing and the trim tabs were also painted yellow.

• P-51C 'Miss-Pelt' flown by Lt Clarence 'Lucky' Lester, 100th FS, 332nd FG. This aircraft is Duraluminium overall with a black anti-dazzle panel and a red nose, spinner and tail. No yellow theatre bands were carried by this machine.

This is another good sheet from AeroMaster and as seems to be the norm at present, this set comes complete with a separate sheet of stencils for two complete aircraft.

We stay with the P-51 for the next sheet as this is entitled "Ninth AF Mustang Aces" (No 48-225) and it offers schemes for four machines. The options are:

• P-51D 'Suede's Steed III', 44-13383, flown by 1st Ltn. William.Y. 'Swede' Anderson, 353rd FS, 354th FG. This machine is Duraluminium overall with a black anti-dazzle panel. The spinner is red and the extreme tip of the engine cowl is black and yellow. Invasion stripes are carried around each wing and on the lower surface of the fuselage.

• P-51B 'Shelleagh', 42-106602, flown by Capt. Kenneth.H.Dahlberg, 353rd FS, 354th FG. This machine is in the same colours as option 1 although the anti-dazzle panel is Olive Drab.

• P-51B 'Live Bait', 43-12451, flown by Capt. Clayton. Gross, 355th FS, 354th FG. This aircraft is Olive Drab over Neutral Grey with a white spinner, nose band and theatre stripes.

• P-51D 'Grim Reaper', 44-630702, flown by Capt. Lowell.K.Brueland, 355th FS, 354th FG. This aircraft is Duraluminium overall with an Olive Drab anti-dazzle panel and a blue spinner. The extreme tip of the engine cowl is white and blue checks and the machine has invasion stripes around each wing and on the lower section of the fuselage.

Another good selection for the P51 and this set comes with two sets of stencils so you have enough for all the options on the sheet. Having found this I suspect that the previous sheet (48-224) should also have two sheets of stencils and mine has obviously missed out on the second.

Yet more P-51s with this next sheet. It is entitled "Ninth/Fifteenth AF Mustang Aces" (48-226) and there are four options on it. The options are:

• P-51D 'Uno-Who?', 44-13882, flown by Maj. George 'Max' Lamb, 356th FS, 354th FG. A standard scheme of Duraluminium overall with an Olive Drab anti-dazzle panel is applied. The spinner and nose tip are red and there are 15" (inboard) and 10" (outboard) yellow theatre bands around each wing.

• P-51D "Short-Fuse", 44-13882, flown by Ltn. Col. Richard Turner the CO of the 356th FS, 354th FG. This machine is in an identical scheme to option one.

• P-51B 'Virginia', 42-106486, flown by Robert McGee, 382nd FS, 363rd FG. This machine is Duraluminium overall with a black anti-dazzle panel. The spinner is yellow and there are 15" black theatre bands around each wing (inboard). This machine has a sharksmouth.

• P-51D 'Marie', 44-13298, flown by Capt. Freddie.F.Ohr, 2nd FS, 52nd FG. This machine is in the same scheme as option one although it also has the entire tail and rudder assembly painted Insignia Yellow.

A pretty colourful selection of P-51's and once again the set comes complete with two separate sheets of stencilling so you have enough for all four options offered on the sheet.

We change sides now as we look at the next sheet which deals with the Messerschmitt Bf 109. The sheet, number 48-228, is entitled Bf 109s of JG 3 and it offers schemes for five machines. These are;

- Bf 109F-4/trop "Yellow 12" of 6/JG 3 operating in Sicily in 1942. This aircraft is RLM 79 over RLM 78 with a sparse mottle of RLM 80 on the upper surfaces. The spinner is half yellow and black and the lower engine cowl is yellow. White wing tips and a white fuselage theatre band are also carried.

- Bf 109G-4 flown by Hptm. Klaus Quaet-Faslem, Gruppenkommandeur of 1/JG 3 at Mönchen-Gladbach in the summer of 1943. The standard RLM 74/75 over RLM 76 scheme is evident with a light mottle of the upper surface colours on the fuselage sides and an RLM 70 spinner.

- Bf 109F-2, W/Nr 6601, flown by Lt. Detlev Rohwer. Technischer Offizier of 1/JG 3 on the Easter Front in the summer of 1941. This machine has RLM 70 (or 71) and RLM 02 upper wing surfaces with an upper decking to the fuselage in RLM 75. The fuselage sides were mottled with RLM 70 and the panel forward of the canopy was RLM 74. All the lower surface was RLM 76. The entire nose, bar a section left around the unit emblem, is RLM 04 (yellow) and the fuselage band and wings tips are in the same colour.

- Bf 109G-6 "White 11", 7/JG 3 during the winter of 1943/44. This aircraft is RLM 74/75 over RLM 76. There are large patches of RLM 02 covering previous tactical markings and the spinner is RLM 70 with a white spiral.

• Bf 109F-2, W/Nr 6743, flown by Oblt. Robert Olejnik. Staffelkapitän of 1/JG 3. This machine is unusual because it is painted RLM 70 (or 71) and 02 over RLM 76. The lower cowl, lower wing tips and fuselage band are RLM 04 (yellow) and the spinner is 2/3rd white and 1/3rd RLM 70.

Once again a very interesting selection of markings for the Bf 109 and my money goes on option four. The set comes with a separate sheet of national insignia and two sheets of stencilling which means you can make four of the options from the sheet without having to look elsewhere for additional decals.

With the release of the excellent MiG 15 from Tamiya (see Reviews) it comes as no surprise to see the decal manufacturers releasing sheets to cover it. Having looked at Cutting Edge's three excellent new sheets last month (See Pages 279-281), here are two new sheets from AeroMaster. The first is number 48-229 and it is entitled 'Korean War MiG Aces Pt.1' and there are four options on it. These options are:

- MiG-15bis, Chinese Sqn commander Chinese Military Air Force, Noak Van Khaya, 9 kills, 1953. Overall natural metal with a red fin tip and nine kill symbols under the cockpit.

- MiG-15bis, Maj. Arkady Boitsov (Russian), Deputy Sqn Commander, 161 1AP/971AD, 10 victories, 1953. Overall Dark Green and Sand over Light Blue.

- MiG-15bis, Lt. Col. Ye Pepelyayev (Russian) Commander of 196th FAR, 23 victories. Overall natural metal with red nose and fin tip.

- MiG-15bis, Capt. Nicolay Ivanov (Russian), 726 IAP/ 1331AD, 1953. Overall Dark Green with Sand and darker green stripes over Light Blue.

Part II of this set is 48-230 and this offers schemes for another four machines. These are:

- MiG-15bis, Cmdr I.P.Galyshevsky, 351 IAP, 1952. Overall Dark Green and Sand over Black.

- MiG-15bis, Capt. Pavel Milauskin (Russian), 176 IAP/3241AD, 10 victories, 1952. Overall natural metal.

- MiG-15 bis, Maj. Nicolay Shkodin (Russian), 147GIAP, 5 victories, July 1953. This machine is dark Green and Sand over Light Blue.

- MiG-15 bis, Capt. A. M. Karel (Russian) 351 IAP, 5 victories, Feb 1953. Overall natural metal.

These are a good couple of sheets and they offer some alternatives to those on the Cutting Edge sheets. No stencilling is included with either sheet and there is a nifty little line on each roundel to ensure you line the star up level, nice touch!

The next two sheets deal with Ramjäger operations by the Luftwaffe in WWII. The first is sheet number 48231 and this is part I. There are five options on this sheet and they are;

- Fw 190A-8/R8 of IV/JG 3 possibly flown by Feldwebel Willi Unger from Ansbach. This machine is RLM 74/75 over RLM 76

and the entire nose and spinner are wine red (FS 11328).

- Fw 190A-8/R8, W/Nr 681382 of IV/JG 3 flown by Hptm. Wilhelm Moritz in 1944. This aircraft is also RLM 74/75 over 76 and has a black spinner with a white spiral and a yellow lower engine cowl. The machine has no upper decking guns but is fitted with extra armour glass on the cockpit canopy.

- Fw 190A-8/R8, W/Nr 682204 of 5/III/JG 300 and flown by Staffel Kapitän Klaus Breitschneider in October 1944. Once again the RLM 74/75/76 scheme is evident and this aircraft has a red spinner with a white spiral and a red fuselage band.

- Fw 190A-8/R8 of 11/IV/JG 3. Flown by Unteroffizier Willi Maximowitz in June 1944. This aircraft is RLM 74/75/76 with the entire nose and spinner painted black. The spinner also has a spiral pattern painted in yellow.

- Fw 190A-8/R8 of 6/II/JG 300. This is a famous machine and it was flown by a very young pilot, Unteroffizier Paul Lixfeld in November 1944. This machine is RLM 75 and what appears to be RLM 66 on top with RLM 76 underneath. The upper deck guns have been removed and additional armour plate has been added to the fuselage sides by the cockpit area. These plates have been painted RLM 02 and it looks as if the machine may have had an engine change as the cowlings look to be a different colour and camouflage style.

Part II of the set is sheet number 48-232 and this offers you schemes for five more machines. These options are;

- Fw 190A-8/R8 of JG 3. This aircraft appears to be RLM 74/75/76 although the entire fuselage sides seem to be covered in RLM 74 with just a small patch of RLM 76 under the cross. The entire nose and spinner are black and there is a white band around the rear fuselage.

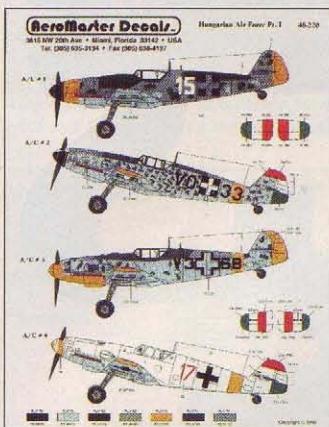
- Fw 190A-8, W/Nr 172732 of 5/II/JG 300 flown by Unteroffizier Ernest Schröder. This machine is in the standard RLM 74/75/76 scheme although the fuselage side has dense patches of RLM 75 which probably cover an earlier aircraft number.

- Fw 190A-8, W/Nr 961076 of 5/JG4 flown by Oberfreiter Axel Kessler. This machine was RLM 81/82/76 with no fuselage mottling. The lower rear fuselage has been densely oversprayed with RLM 81/82 to partially cover the Reich defence band and the engine cowls are in RLM 75 which probably denotes it is a replacement unit.

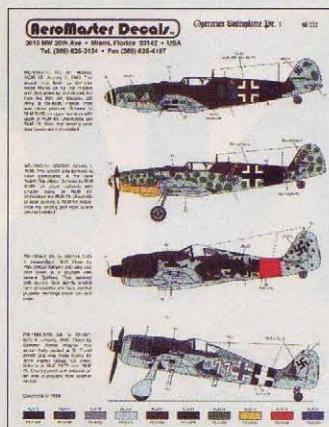
- Fw 190A-8/R8, W/Nr 641497 of 5/JG 4 flown by Gefr. Walter Wagner. If you think this sounds familiar it is as this is option four on the Bodenplatte sheet (48-222).

- Fw 190A-8/R8, W/Nr 738360 of 5/JG500 flown by Uffz Mattäus Erhard. This machine is RLM 74/75/76 with a black spinner and a white spiral. The upper decking guns have been removed and additional armour plating has been added to the fuselage sides.

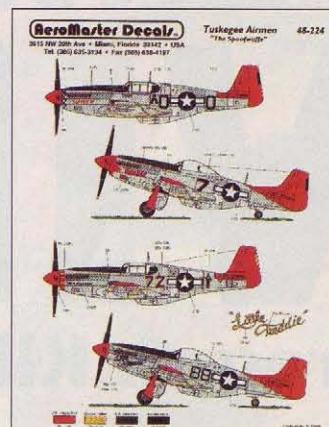
Both of these sheets offer some colourful schemes for these bomber destroyer Fw 190s and each set comes complete with an extra sheet of national insignia and one of



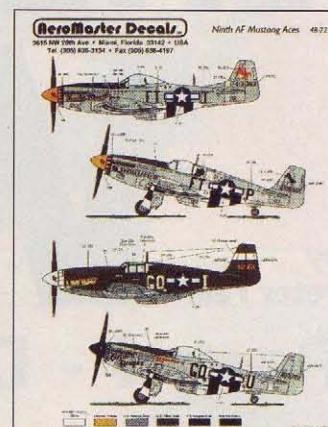
Some colourful schemes for Hungarian operated types are offered on 48-220



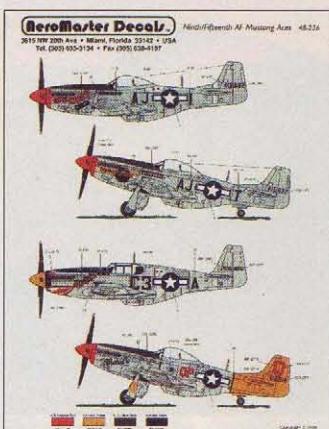
This is the first part (48-222) of a two part set covering Luftwaffe types which operated in Operation Bodenplatte



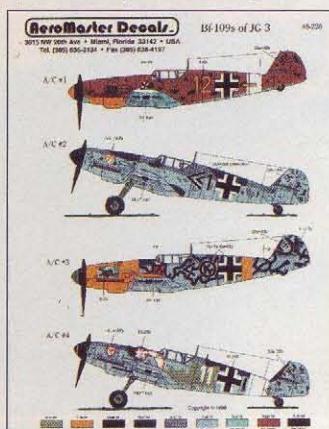
Aircraft of the 332nd FG are depicted on 48-224, 'The Tuskegee Airmen'



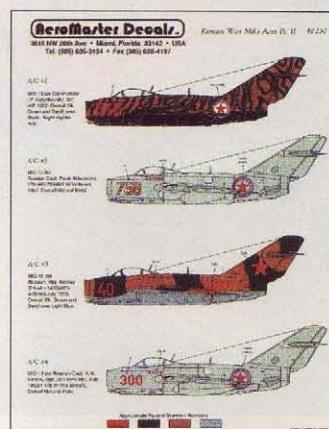
More aces' machines are offered on 48-225, this time P-51's of the 9th AF



Yet more aces' mounts are on 48-226, these are for 15th and 9th AF Mustangs



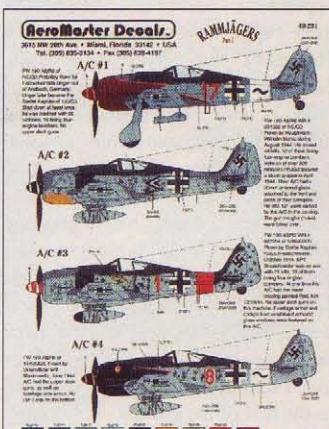
Messerschmitt Bf 109's operated by JG 3 are depicted on 48-228



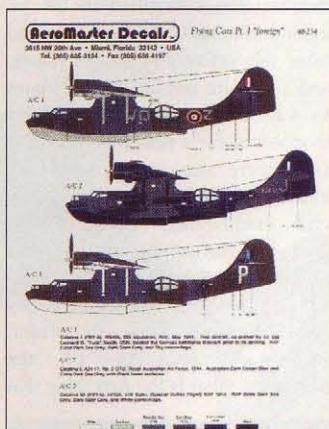
With the excellent new kit from Tamiya it did not take long for some decal sheets to arrive for the MiG-15. This is the first of two sheets by Aeromaster, number 48-227...



...and this is the other, 48-230



Ramjäger operations by the Luftwaffe in WWII were extremely hazardous and this is the first (48-231) of two sheets to deal with the subject...



Due to the size of a Catalina in 1/48th scale and therefore the size of its markings, sheet 48-234 can only offer markings for three machines



...whilst 48-232 is the other

Bismarck prior to its sinking.

- Catalina I, A24-17 of No 3 OTU, RAAF, 1944. This aircraft is Australian Dark Ocean Blue and Extra Dark Sea Grey with Black under surfaces.
- Catalina IB (PBY-5), FP225 of No 240 Sqn (Special Duties Flight), 1944. This aircraft is Extra Dark Sea Grey and Dark Slate Grey over White.
- Catalina I (PBY-5), W8406 of 209 Sqn in May 1941. This machine is Extra Dark Sea Grey and Dark Slate Grey over Sky. It was in this machine that Lt. (jg) Leonard B. "Tuck" Smith USN located the German battleship

Due to the sheer size of the roundels etc for the Catalina in this scale that is all that will fit on the standard sized sheet, but the selection is good enough as I cannot see

In addition to all the specific sheets for aircraft types the last offering is a new addition to the popular 'singles' series. Numbered 148-009 the sheet offers you the basic stencilling markings for the Supermarine Spitfire Mk I-IX. All of the trestle and servicing markings along with DTD and walkway indicators are included for two complete machines and for just £1.99 it is a sheet well worth having.

This has been a very good selection from AeroMaster and I suspect that there is

something for most modellers here. The quality of the decals is, as usual, excellent and the colour instructions look nice. However I must say that I prefer the narrative description of the camouflage scheme instead of the new 'keyed' type with you having to match the colours to sample patches at the bottom of the page. Some of the RLM colours look remarkably similar!

All of the AeroMaster range is now exclusively imported into the UK by H.G.Hannant Ltd and the prices from this source for the sheets reviewed are as follows:

48-220	£5.95	48-222	£7.75
48-224	£5.95	48-225	£5.95
48-226	£5.95	48-228	£5.95
48-229	£4.95		
48-230	£4.95		
48-231	£5.95	48-232	£5.95
48-234	£4.95	148-009	£1.99

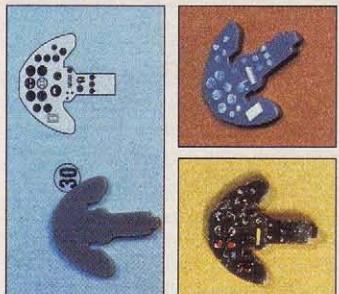
All are recommended and my thanks goes to AeroMaster for the review samples.

THE EMPEROR'S WINGS

by
Peter Fearn

Part 4 - Dragon Killing

As early as 1937 the IJAAF chiefs of staff began to realise that any modern air arm would need a long range fighter. To fulfil this need the powers that be issued a requirement for such a design. The resulting design entered service many years later as the Army Type 2, Ki-45 Toryu "Dragon Killer", known to Allied pilots as the Nick. Serving not only in its intended role as a long range fighter the Nick also performed ground attack, anti-shipping and perhaps its most famous role, bomber interceptor, with great distinction. The first version to enter service was the Ki-45 Kai Kho, compared to the prototype this was practically a new design! To meet the desired performance specifications Kawasaki redesigned over 90% of the aircraft.



These shots shows how the kit instrument panel is detailed and painted to give a more accurate representation than the decal supplied in the kit

The first combat units to use the Nick were the 21st Sentai in Burma and the 16th Sentai in China. Having for a long time admired the graceful lines of the Nick I was raised to a state of complete ecstasy when the rumours of Hasegawa producing not one but two kits of the beast were confirmed as true!! Having driven my local model shop owner mad with the regular "is it in yet?" the first version is now available. As the first offering is the Kai Kho I will not be covering the other variants just now, but will save them for later. Just to squash any unfounded rumour you may have come across this is a totally new set of mouldings.



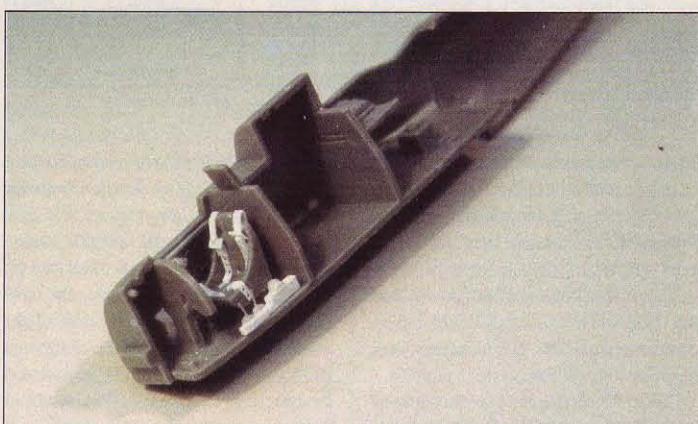
The Kit

The quality of the mouldings is to the usual high standard set by Hasegawa, with decal options for two aircraft, 4th and 5th Sentai. The construction of the kit is very straightforward and makes into a very attractive model. For me the kit has only two drawbacks! One which I can do something about, one which I cannot! The one I can correct is the lack of detail in the pilot's and rear gunner's area together with the lack of detail in the wheel wells. Problem two, the one I can't fix is the price! Nearly £23!! (No more said on that subject I think). Without further comment let's get stuck in!

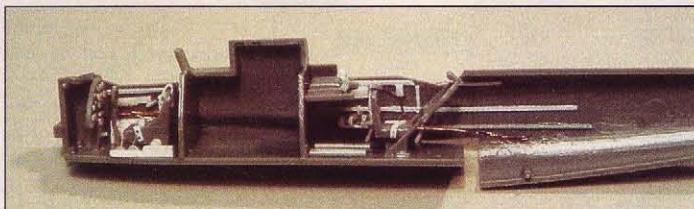
Stage 1

As is always the case with me the cockpit interior supplied in the kit seemed distinctly lacking, so out came the reference books, plastic card, fuse wire and box of chocolates (to sweeten up my wife when I disappeared for a few hours). In this issue there are some wonderful drawings of the interior which I only wish could have been in my possession earlier! These along with the two photographs in this article will help you to fill a lot of empty space. Starting from the front, Hasegawa's rendition of the instrument panel is the first thing that

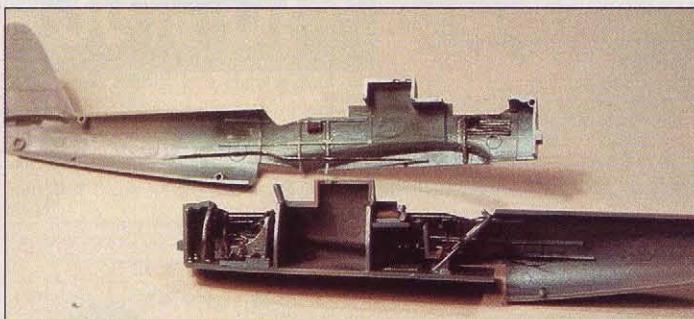
will need some work. Supplied as a smooth item to which a decal is applied the concept is to me usually quite satisfactory, but on this occasion Hasegawa have given us a white background with black dials! This does not look at all convincing. Using drawings and photographs position thin slivers of various sized plastic rod on the panel to represent the dials, paint the background in dark grey and when dry pick the dials out with gloss black. Once completely dry the dials can be dry brushed to give them depth, the finished item looking much more convincing. The panel was then glued into place and attention turned to the rest of the cockpit. The control column, part D18, and bulkhead, D2, were glued into place and additional side consoles fashioned from plastic card. Rod and fuse wire were added to give the area a more authentic look before adding a new seat made from 10 thou Plasticard. My attention then turned to the rear cockpit, this is where my plans came a bit unstuck. Parts D7, D8 and D11 were attached and left to dry whilst I tried to find additional information on this area. All my efforts seemed to go well until I reached the area to the rear of the gun mount, I just could not find anything so I settled for just adding the items that I did have reference for and proceeded to paint the entire



This shows the detail added to the pilot's area. The seat is scratch built as are all the white components



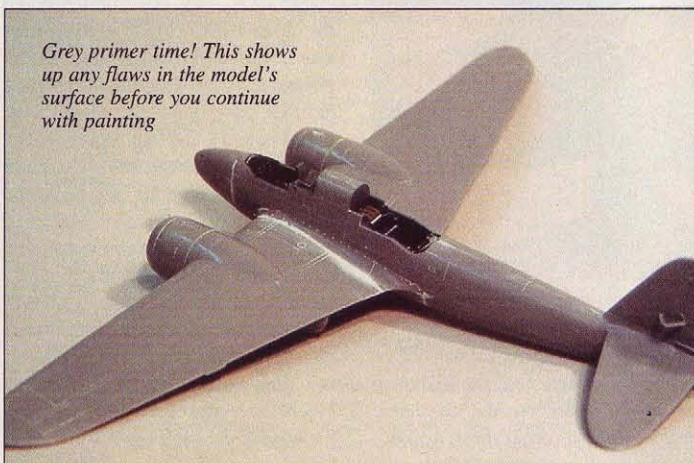
An overall view of the completed fuselage interior. All the white areas are plastic card and there is also wire used for plumbing etc



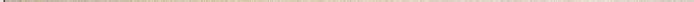
Detailed starboard fuselage side in comparison to the standard port fuselage side as supplied in the kit



The wheel wells of the Nick have to have a roof added, plus as much detailing as you require. Once again all the white areas are scratch built



Grey primer time! This shows up any flaws in the model's surface before you continue with painting



cockpit area. The fuselage halves were then joined together. Now sticking to that well known law, Sod's Law, a week or so after completing this stage I purchased a book which had all the missing information. My next Nick will have all those little extras added. As mentioned earlier, in this addition of Scale Aviation Modeller there are some very fine cockpit drawings of the Nick that will be of great assistance to you. At this stage according to the instruction sheet parts A1, A2, E12 x 2 and F1 should be added, but to make the painting and decalling stage easier I



The basic airframe together. Note the use of filler on the wing joints



The upper colours were all applied with an airbrush using colours from the Aeromaster range

would advise that only parts A1 and A2 be attached at this stage of construction.

Stage 2 Main Wing Assembly

Hasegawa have kept the amount of parts down to a minimum for the assembly of the wings. To me this is a most satisfactory arrangement, less parts, less joins, less filler. My only niggle in this area is the lack of detail in the wheel wells, in Hasegawa's recently released kit of the Ginga "Francis" they have at least included the roof of the bay, the Nick however is sparse! Still not a problem as anything can be rectified with a little reference and some plasticard. Formers were added to the insides of



Having removed the wing tip light area from each wing, they were replaced with a coloured piece of clear plastic. Once dry this was sanded and polished to the correct profile

the nacelles along with some assorted stretched rod to simulate various fuel and hydraulic lines, two pieces of 20 thou card were glued to the insides of the upper wings to represent the wing spars. Once this work was done the tops of the wings, B11 and B12, were glued into place on part C1. Another



small job that I chose to carry out at this stage was to replace the moulded-in navigation lights with pieces of coloured clear cocktail stick. After being given time to dry these were filed and sanded to shape. The wings could now be offered up to the fuselage. On my model I found that the wing roots needed a little filler to give a good join.

Stage 3 The Nose

At this point I began to um and ah! Should I build the kit version, the Kai Kho with its twin machine guns, or the Kai b with the 37mm nose mounted cannon? I settled for the Kai Kho (that means I will have to buy another Nick!)(I know how many you already have-Ed). The fit of the nose cone was not what could be described as perfect, but with a couple of dry runs and a little care a good fit could be obtained. In the nose of the Kai Kho behind the glazing is a small landing light, this is not included in the kit so one will need to be made. I found the easiest way to do this was to push a match head into some tin foil and then carefully remove the impression with a sharp knife, when this is in place it looks quite convincing.



problems, if it's the blotched version (veined) make sure you find a photo of the Nick you are building, some have the green areas brushed on, giving hard edges, whilst others have the green sprayed on giving a soft edge. Should you wish to build the Nick given by Hasegawa the green should be hand painted with a hard edge. The Nick I chose to model was from the 13th Sentai, this particular Nick has soft edged blotching. Paints used for the colour scheme were from the Aeromaster range, it was the first

After 24 hrs I weathered my model using a little trick that I had discovered accidentally. Taking a piece of damp 1200 grade wet and dry gently rub over the entire surface of your model from front to back to simulate the airflow, once done wash your model, allow it to dry and matt varnish! Hey Presto, one war weary looking aircraft. A few final touches here and there, remove the masking and your "Dragon Killer" is finished.

My conclusions on the kit, well as I have already said I think it's a lot of money. Accuracy wise it's very good, very good indeed. The more experienced modeller will gripe (like me) about the lack of detail in certain



Stage 4 Final assembly

Your kit of the Nick is not far from being completed. Following the remaining stages on the instruction sheet presents few problems providing you dry run the parts first, the only items that I found needed any careful work done to them being items B3 and B6. Regarding part B1, the breach bulge, check photographs of the aircraft you are building as not all Kai Kho's had these.

Stage 5 Finishing

One must start by deciding on whether to build either an overall grey Nick or one of the stunningly attractive blotched ones! Once you have made up your mind STOP! If it's the grey version go ahead, no

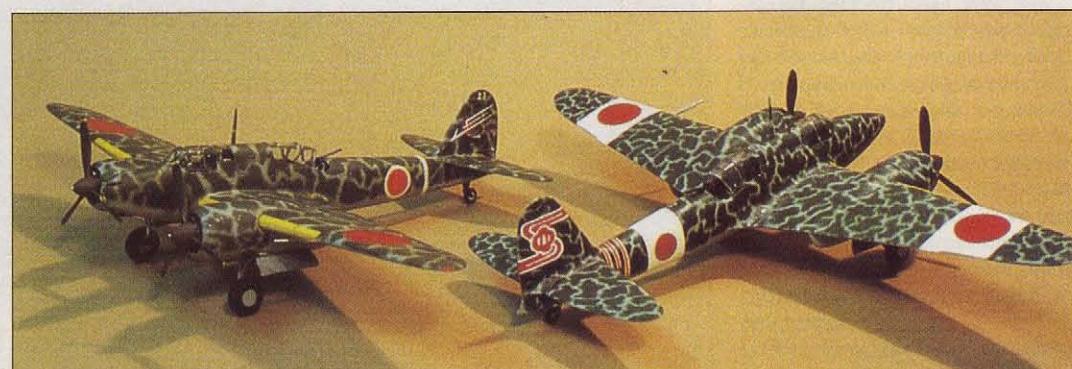
areas and the less experienced enthusiast will wait for the add on brass things that are bound to come along. Some might not even be worried by these shortcomings in the kit. What it all boils down to is you pay your money and takes your choice! The only other option being the old Revell kit, which in all fairness was not a bad kit for its day. In the photographs that go with this article I have included one which shows both the Hasegawa and the Revell Nicks together for comparison, the main difference between the two being the wing plan form.

I hope you have enjoyed this edition of "The Emperor's Wings", the next one planned is for the A6M5 family, but for the foreseeable future I will have to do a lot of grovelling to my dear wife! There are a lot of colour schemes for the Nick you know!! Flowers and choos for a while I think.

Peter Fearn

time that I have used these and I must say I was quite impressed! In all this was the most difficult part of building the model, but also the most satisfying. When the paint had been given time to dry the model was given

an overall coat of gloss varnish before adding the decals. All the markings except the ones on the fin came directly from the decal sheet, my only comment here being that the Hinomaru seemed a little too opaque.



The Hasegawa Nick (Left) stands alongside the old Revell (Right) version. Nearly 20 years separate these products!

30% OFF

Congratulations to all at Scale Aviation Modeller for still further increasing circulation. To celebrate this we are offering 30% off all the prices shown below.

ACCESSORIES

FTA001 Accurate Buccaneer nose for Airfix kit	£1.50
FTA002 Replaced by FTA053	
FTA003 Jaguar laser nose for the Airfix kit	£1.50
FTA004 Hunter T8M nose to convert Matchbox kit	£1.50
FTA005 Accurate Tomcat nose for Italeri kit	£1.50
FTA006 Late TBM3 Avenger nose for Academy kit	£1.75
FTA007 5 Spitfire entry doors with crowbar	£1.50
FTA008 3 Spitfire entry doors with crowbar in 1/48	£1.50
FTA009 5 RAF WW2 style blind flying panels	£1.50
FTA010 3 Martel TV missiles, launch rails, designator pod and pylon	£2.50
FTA011 Replaced by FTA107	
FTA012 Replaced by FTA108	
FTA013 2 RAF Pav Spike pods	£1.50
FTA014 RAF Tomado Hindenburger fuel tanks	£2.95
FTA015 2 RAF Jaguar long range fuel tanks	£2.95
FTA016 RAF Jaguar under fuselage recce pod	£1.95
FTA017 Rear nacelle extensions for late mark Grumman Tracker	£1.50
FTA018 2 JP233 munitions carriers	£1.95
FTA019 Accurate Sky Shadow ECM pod (revised moulding)	£1.50
FTA020 RAF BOZ107 pod (revised moulding)	£1.50
FTA021 Correct shaped tail insert for Italeri 1/48 Tomado	£2.50
FTA022 2 F4E Phantom tail pipes and exhaust cans in 1/48	£2.50
FTA023 Deleted	
FTA024 1/48 brass etched ammunition belts	£1.50
FTA025 1/32 brass etched barbed wire	£1.50
FTA026 4 brass etched 7 cylinder ignition harnesses	£2.50
FTA027 9 Cylinder as above	£2.50
FTA028 14 Cylinder as above	£2.50
FTA029 18 Cylinder as above	£2.50
FTA030 Complete cockpit interior for ME Bf109E	£2.50
FTA031 Deleted	
FTA032 Complete flap set for any 1/72 Jaguar	£1.50
FTA033 Large capacity tip tanks for Hasegawa P2V Neptune, including searchlight transparency	£1.95
FTA034 Vacform Spitfire bubble canopy	£0.50
FTA035 Vacform Jaguar GR1A canopy	£0.50
FTA036 Long nose Mistral conversion	£1.95
FTA037 APS20 Under fuselage radome	£1.50
FTA038 Canberra TLL pointed nose	£1.50
FTA039 3 Lightning FOD guards in 1/48	£1.00
FTA040 Martel data acquisition pod and pylon	£1.50
FTA041 2 1/48 RAF Tomado Hindenberger fuel tank	£3.95
FTA042 2 1/48 RAF Tomado standard fuel tanks	£3.00
FTA043 RAF TIALD acquisition pod	£0.75
FTA044 AL0119 ECM pod	£1.50
FTA045 3 lightning FOD guards	£0.75
FTA046 2 1/48 Spitfire three spoke wheels	£0.60
FTA047 A32 Lansen belly fuel tank	£0.60
FTA048 A37 Viggen underbelly cannon pod	£1.95
FTA049 4 Martel radar missiles and launch rails	£1.95
FTA050 Deleted	
FTA051 1/48 Spitfire gull wing centre section	£1.00
FTA052 3RAF WW2 blind flying panels in 1/48	£1.50
FTA053 Accurate replacement nose for Hasegawa Tomado	£1.50
FTA054 Spitfire floatplane conversion	£2.50
FTA055 ME Bf109 butterfly tail conversion	£1.50
FTA056 2 RAF Phantom FOD guards	£0.50
FTA057 MIG 17 fighter nose for KP kit	£0.95
FTA058 8 RAF under fuselage chaff dispensers	£0.50
FTA059 1/48 F16 extended parabrake housing	£0.95
FTA060 Ten injection moulded spinners to replace the flimsy items found in vacform kits (small)	£1.00
FTA061 as above but larger	£1.00
FTA062 2 RAF Jaguar Overwing missile pylons	£1.00
FTA063 2 Buccaneer RWR bullets	£1.00
FTA064 2 RAF long tail CBLs carriers	£1.50
FTA065 Deleted	
FTA066 Firefly FR1 ASH radome and replacement vacform canopy for NOVO kit	£1.50
FTA067 2 Accurate Buccaneer slipper tanks	£2.00
FTA068 4 large 4 small Spitfire wing blisters	£1.50
FTA069 Canberra T17 conversion	£2.50
FTA070 2 fully detailed Buccaneer air brakes and ear fuselage housing section	£2.95
FTA071 Buccaneer arrestor hook, refuelling probe and tail bumper	£1.50
FTA072 Deleted	
FTA073 Replacement vacform canopy for NOVO Firefly	£0.70
FTA074 Wing mounted F4U-5FN Corsair radar pod	£1.00
FTA075 1/48 German WW1 seated pilot	£1.95
FTA076 1/48 British as above	£1.95
FTA077 1/48 Italian as above	£1.95
FTA078 FW190 annular ducted flow spinner and prop	£1.95
FTA079 Accurate Avenger propeller	£0.95
FTA080 WW2 under fuselage ASH radome	£0.95
FTA081 Kitshire one step polish and scratch remover for all injection moulded canopies	£2.95
FTA082 2 1/48 early ME Bf109 main wheels	£0.60
FTA083 1/48 Tomado rear cockpit top mounted console	£1.50
FTA084 3 correctly sized ME Bf109 tailplanes to correct the undersized Hasegawa/Academy versions	£1.50
FTA085 6 underwing six tube rocket launchers as used on Skyraiders	£1.50
FTA086 2 Buccaneer ejection seats	£0.99
FTA087 2 Swedish RB04 missiles	£1.95
FTA088 2 Correct shaped Bristol Hercules cowling with engine inserts	£1.50
FTA089 4 as above	£2.90
FTA090 1/48 P51B/C/D main undercarriage bay, to replace the too shallow version in the Hasegawa kits	£1.95
FTA091 2 Spitfire under wing radiators	£0.99
FTA092 Lancaster B2 bulged bomb bay	£2.95
FTA093 KC130F refuelling pods	£2.50
FTA094 C130E Hercules nose	£1.50
FTA095 HC/WC130H nose and dorsal radome	£2.50
FTA096 HC130N Hercules refuelling pods (2) and dorsal radome	£3.95
FTA097 WW2 underwing ASV radome	£0.80

134 High Street
ONGAR
Essex
CM5 9JH
Tel: 01277 363959
Fax: 01708 750387

FINAL TOUCH PRODUCTS

A RANGE OF ACCESSORIES, CONVERSIONS, AND KITS IN RESIN, WITH WHITE METAL PARTS WHERE APPLICABLE. ALL TO 1:72 SCALE UNLESS INDICATED.

AIRCRAFT SPECIAL PACKS

Specialty formulated packs offering savings over individual purchases.

FTAS001 Fleet Air Arm Buccaneer comprising new nose, three Martel TV missiles, launch rails, designator pod and pylon, correct shaped fin and fin top fairing, replacement vacform canopy	£6.50
FTAS002 RAF Jaguar pack comprising recce pod, long range fuel tanks, ALQ101, Phimatt, vacform canopy	£6.00
FTAS003 Gulf Buccaneer comprising new nose, Pav Spike pod, ALQ101, correct shaped tailplane, vacform	£4.50
FTAS004 Gulf Tornado comprising new nose, JP233 set, Hindenburger fuel tanks, BOZ107, Sky Shadow, Triad pod and vacform canopy	£9.30
FTAS005 1/48 Tornado Pack One, comprising Hindenburger fuel tanks and correct shaped fin plus rear cockpit console, Correct Italeri kit	£6.00
FTAS006 1/48 Tornado pack Two, As above but with standard fuel tanks	£5.00

FTAS007 Lightning Trainer pack, comprising both the T4 and T5 fuselages and new canopies	£10.00
FTAS008 RAF store pack comprising ALQ101, Pav Spike pod, Jaguar recce pod, BOZ107 Sky Shadow, JP233 set, Jaguar long range tanks, Tornado Hindenburger tanks, Triad pod, Jaguar overwing missile pylons, CBLs carriers, fuselage chaff dispensers, vacform canopies for Tornado, Jaguar and Buccaneer	£15.00
FTAS009 Complete Buccaneer comprising new nose, correct shaped tailplane, RWR bullets, slipper fuel tanks, detailed airbrake set, ALQ101, Arrestor hook, refuelling probe, tail bumper	£9.00
FTAS010 Fleet Air Arm AEW set comprising the Avenger AS4/5/6 and Skyraider AEW1 conversions	£9.66

STARTER PACKS

Special budget priced packs for those modellers who wish to use either the parent kit or the spares box for the smaller parts, such as undercarriages etc. Each pack comprises fuselage, wings, tailplanes and canopy.

STP001 Seafire FR47	£5.95
STP002 Defiant Mk1 (revised kit)	£5.95
STP003 Fairey Battle	£5.95
STP004 Fairey Battle Trainer	£5.95

ORDERING

POSTAGE AND PACKING

Inland: All inland orders are sent post free.

Overseas: Charged at cost if ordering by credit card. Please add 40% if ordering by any other method.

Prices: Are correct at the time of advert compilation. Only prepaid orders are accepted.

Deliveries: Orders are usually despatched within seven days. However, stock and postal delays do occur so please allow 28 days to expire before enquiring about your order.

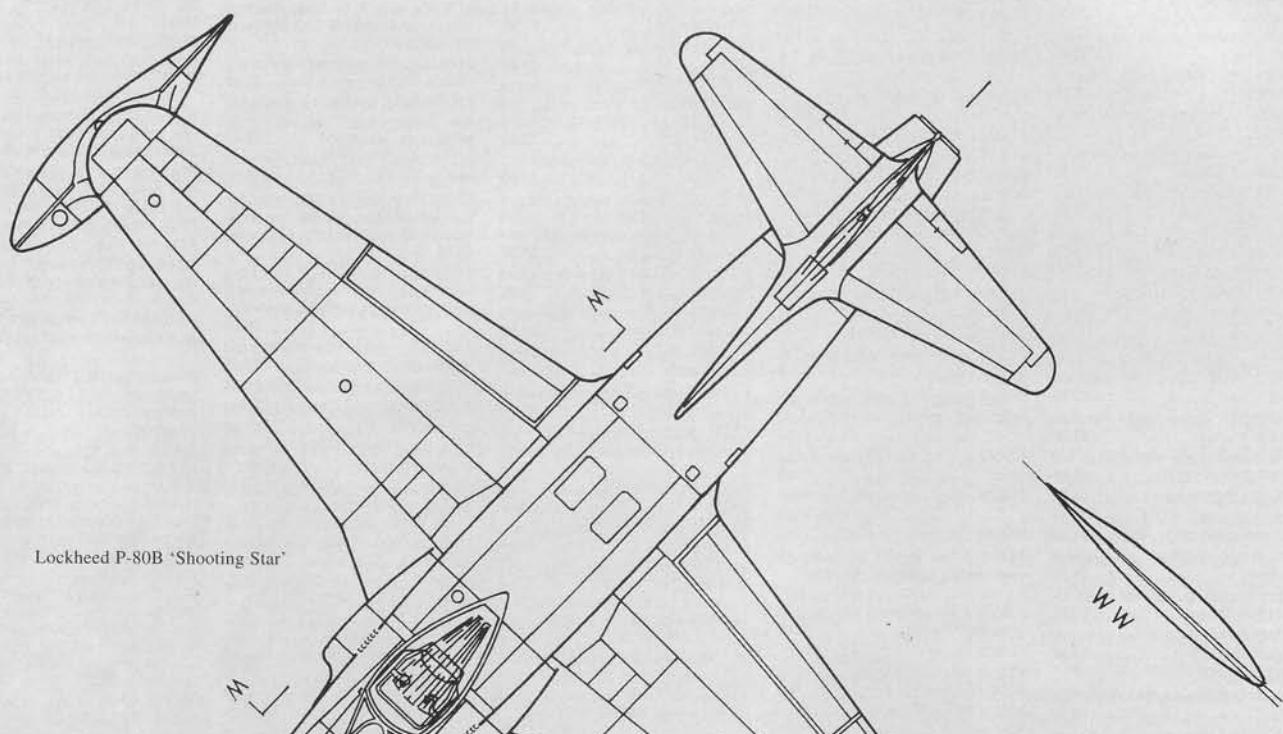
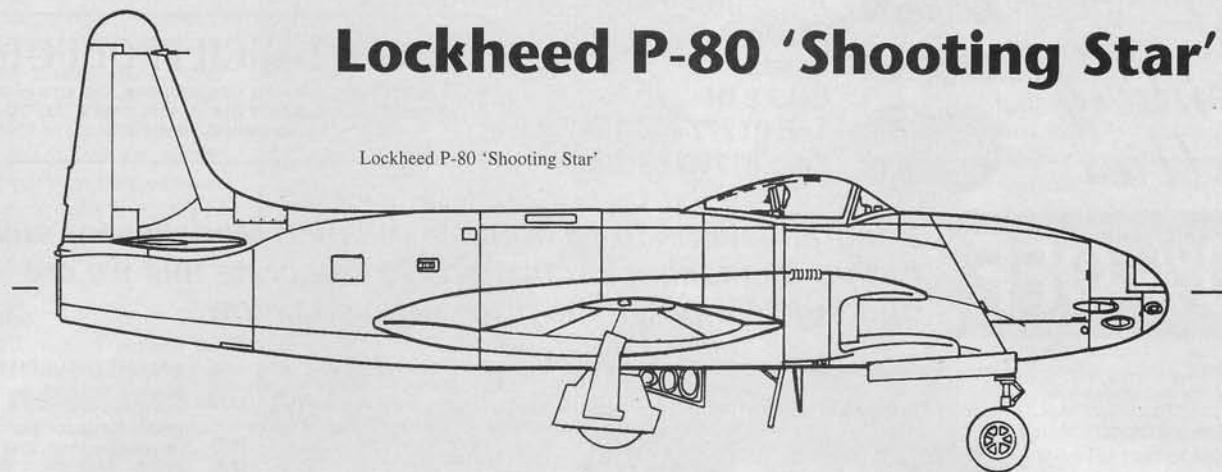
Hours: We are available for orders or enquiries from 10 until 6 Monday to Friday and from 10 until 12 noon on Saturdays. As we are a mail order company please note that callers are only welcome by appointment.

CONVERSIONS

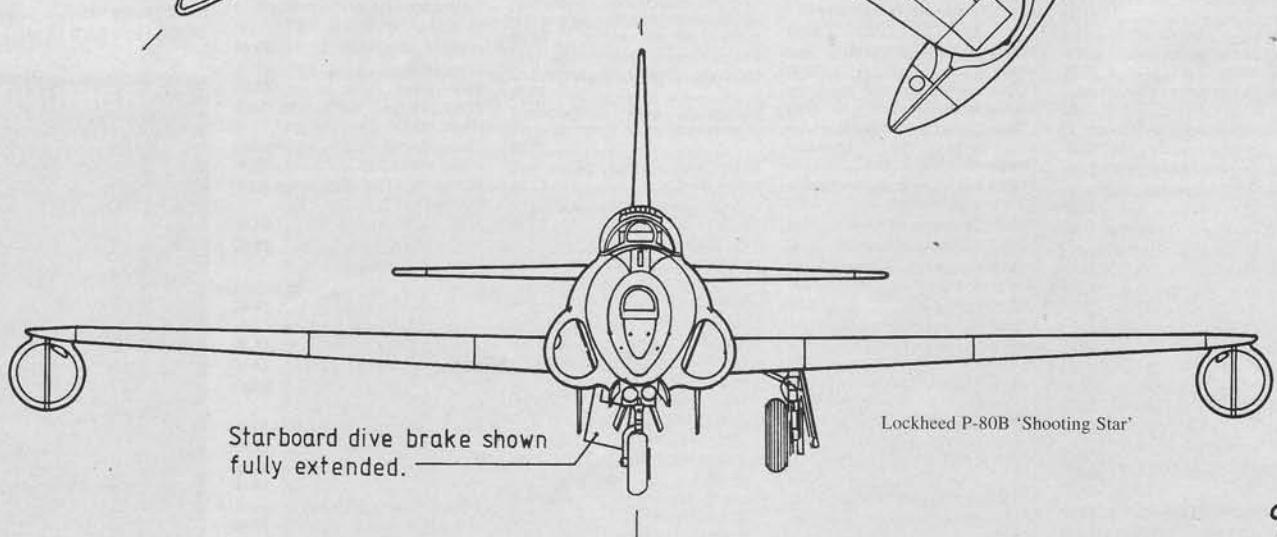
FTC001 Skyraider AEW1 (AD4W) replacement fuselage and canopy to convert Airfix kit	£4.95
FTC002 TBM3W Avenger, replacement fuselage to convert Academy kit	£4.05
FTC003 Firefly T1 trainer fuselage and canopies to convert NOVO kit	£5.95
FTC007 WW2 underwing ASV radome	£0.80

Lockheed P-80 'Shooting Star'

Lockheed P-80 'Shooting Star'



Lockheed P-80B 'Shooting Star'

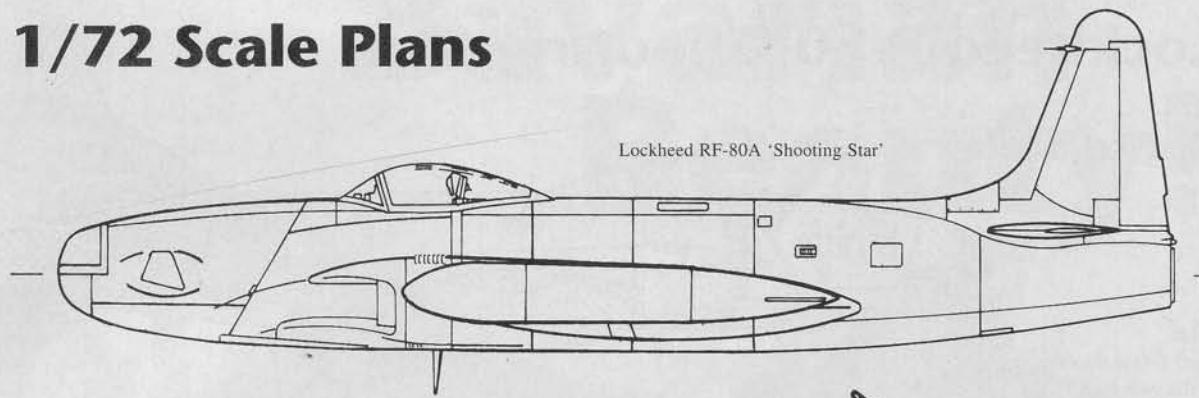


Lockheed P-80B 'Shooting Star'

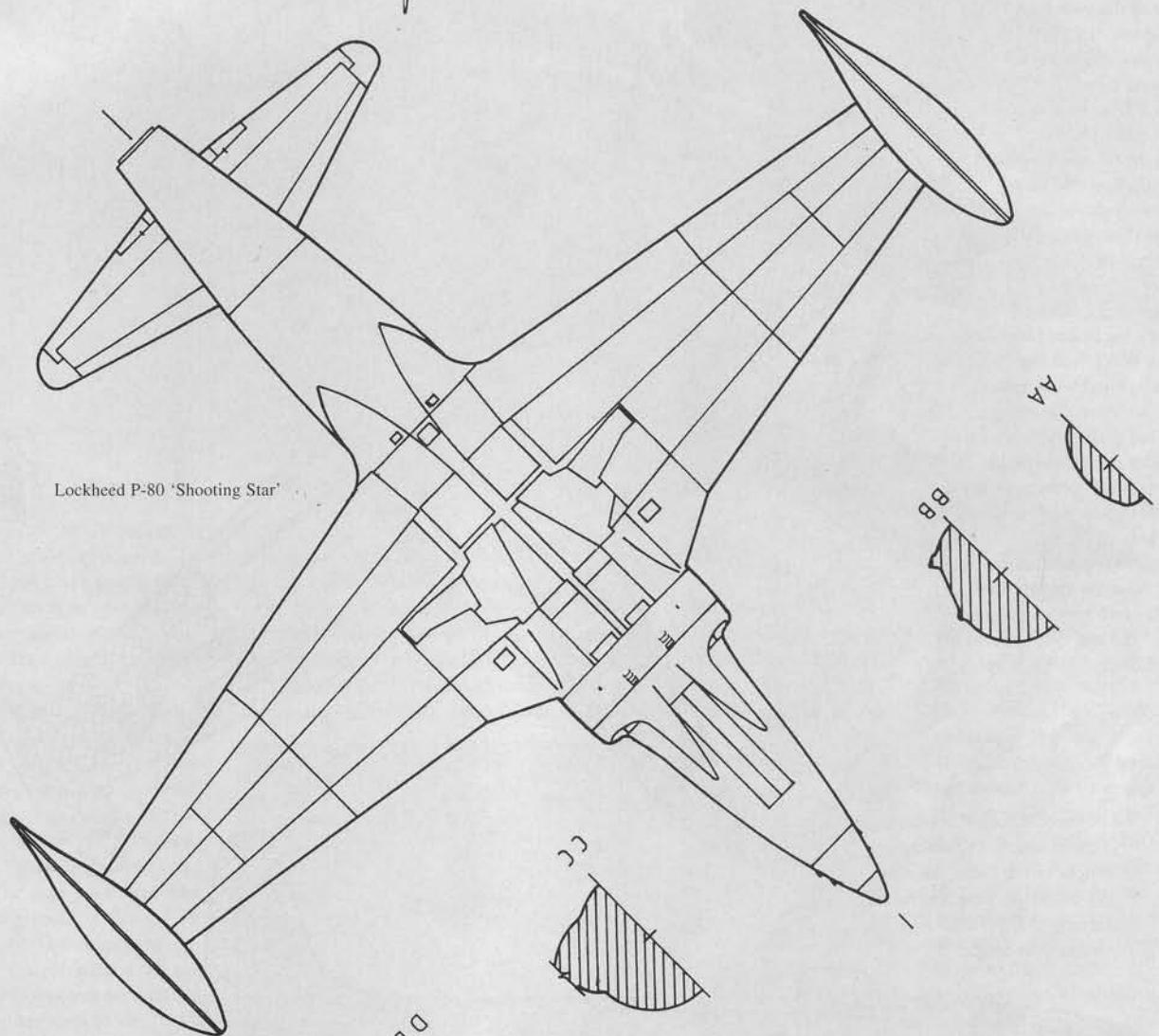
Starboard dive brake shown
fully extended.

1/72 Scale Plans

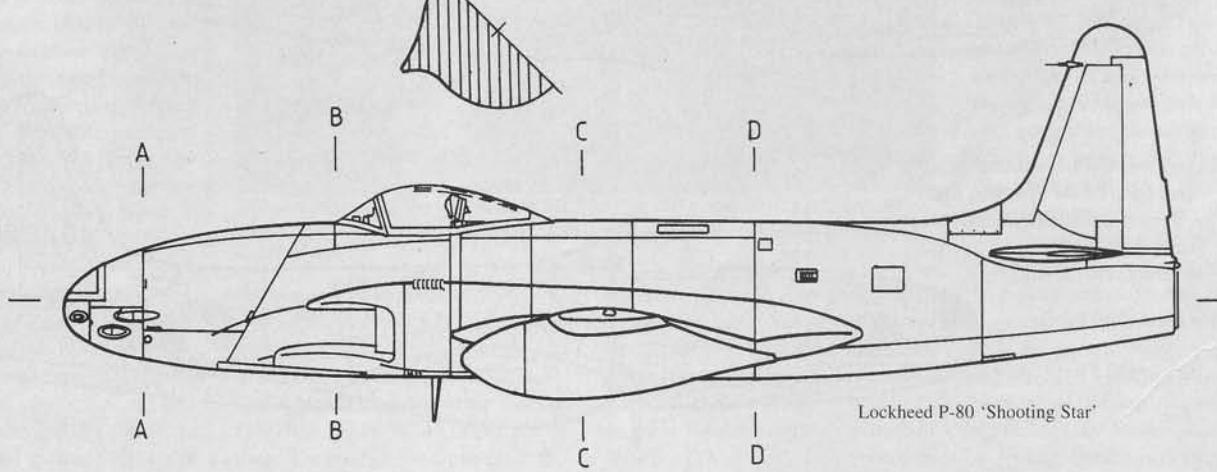
Lockheed RF-80A 'Shooting Star'



Lockheed P-80 'Shooting Star'



Lockheed P-80 'Shooting Star'

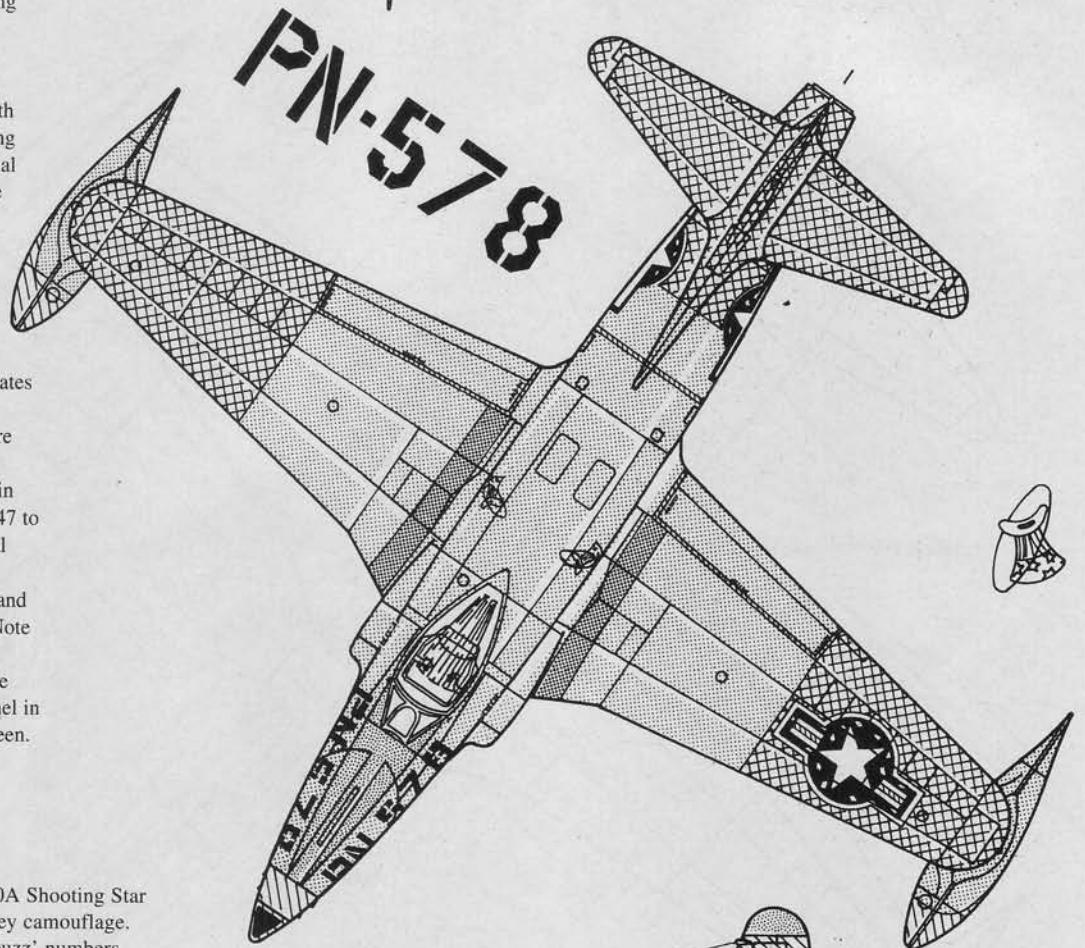
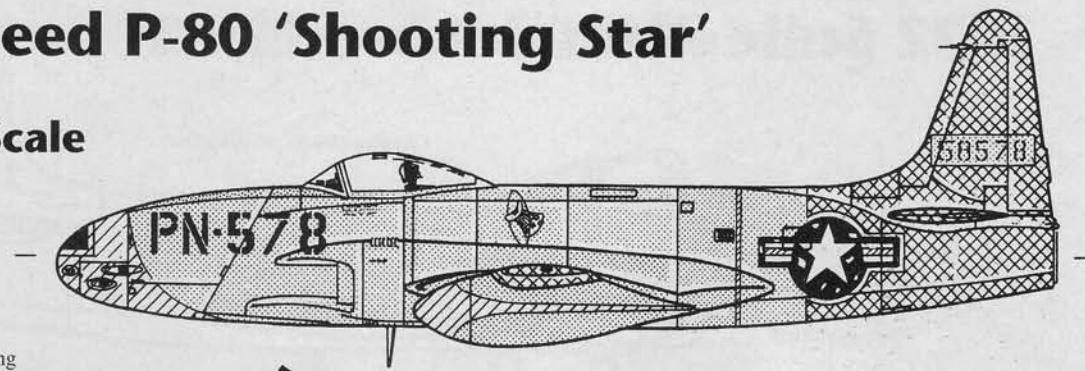


Lockheed P-80 'Shooting Star'

Not to Scale

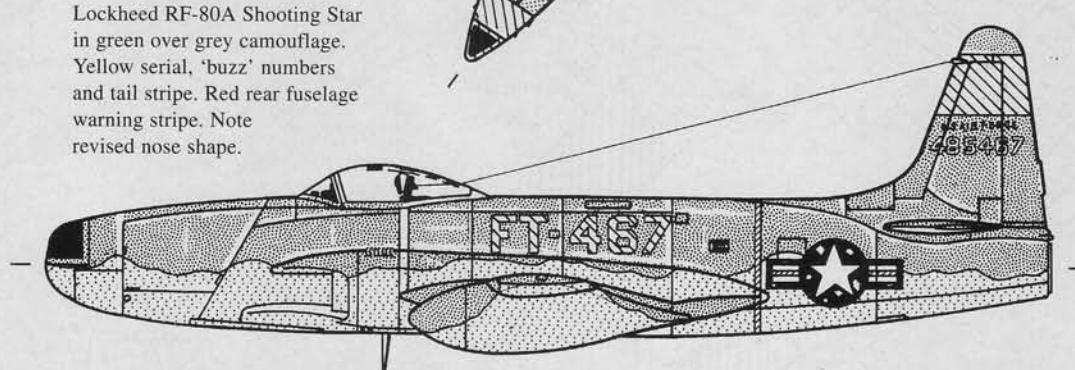
1 & 1a

Lockheed P-80B Shooting Star of the 94th Fighter Squadron (FS) based at March Field, California. Natural metal overall with Royal Blue nose and wing tip tanks trim. Black serial and 'buzz' numbers (See detail). Red 'No Step' warning outline to flaps (See plan view), and red 'Warning' stripes to rear fuselage. unit insignia of Uncle Sam's hat in a red ring dates from WWI. Red rear fuselage and wing tips are special 'Arctic' marking carried during exercises in Alaska from October 1947 to March 1948. Note natural metal outline to national insignia on the fuselage and wings (See plan view). Note that on some aircraft tip tanks were grey with blue trim. The anti-dazzle panel in front of the cockpit is green.



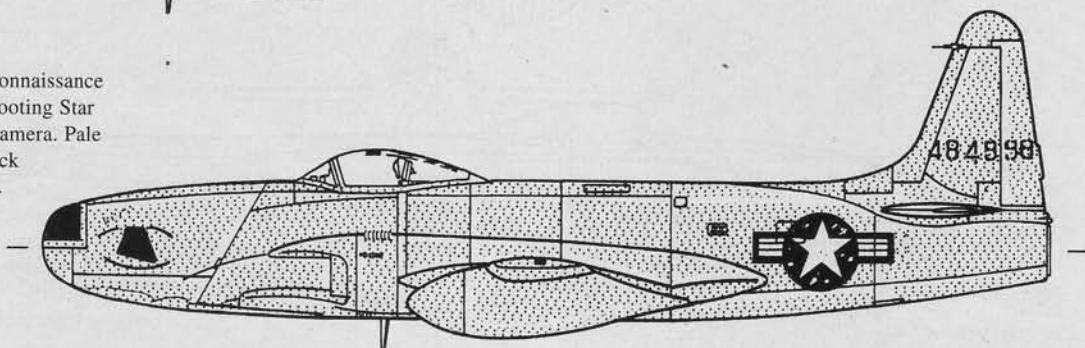
2

Lockheed RF-80A Shooting Star in green over grey camouflage. Yellow serial, 'buzz' numbers and tail stripe. Red rear fuselage warning stripe. Note revised nose shape.



3

Lockheed F-14A reconnaissance conversion of the Shooting Star with nose mounted camera. Pale grey overall with black serial on vertical tail.



Bavarian Beauty!



The range of WWI aircraft in 1/48th scale produced by Eduard just keeps getting better and better. The latest release to come from the Czech model manufacturers provides you with an excellent model of one of the most prolific German fighters of the war.

The Albatros D.Va was developed by improving the design of the very popular Albatros D.III fighter. It differed from its predecessor by having an elliptic section fuselage, the wings and empennage remaining virtually unchanged. The engine, a Mercedes D.IIIa producing 160HP, remained the same, as did the performance figures much to the disappointment of the fighter pilots who received the Albatros D.V at the front line units in May 1917. Unfortunately the old curse, the risk of wing failure in a dive, also remained in the Albatros design. Despite all these drawbacks the German Air Corps retained the type on strength until the end of The Great War. Certainly while it was in the hands of fighter aces such as Von Richthofen, Udet, Von Hippel, Von Tutschek and Herman Goering the Albatros DV was always a threat to Allied air power.

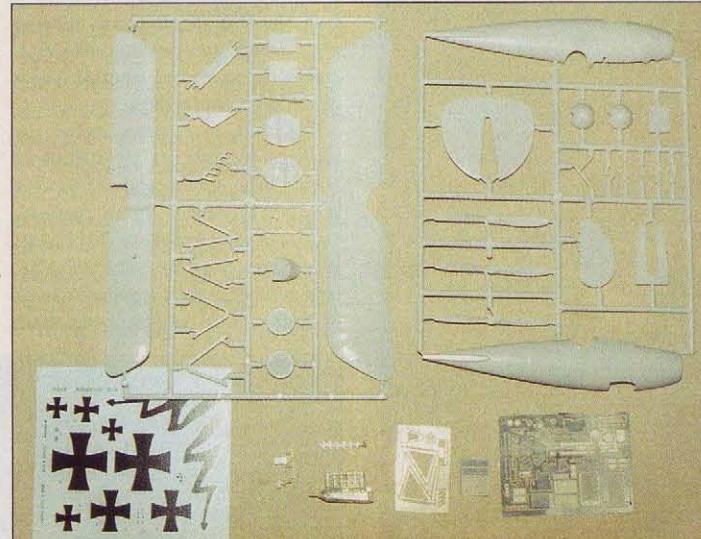
The Kit

Comes to you in Eduard's usual high quality presentation box and is an immediate object of 'desire'! On opening the box it immediately became apparent that things had changed at Eduard. The injection moulded plastic parts are of much, much higher quality and point

perhaps to an increased production schedule because 'gone' are the big old heavy injection gates of previous kits. The detailing of the plastic parts is much finer and crisper. The whole kit is much easier to deal with. So it would appear the 'limited run' label which Eduard have

drawings on the first page. All in all I couldn't wait to get started, so it was lock the girlfriend and the cat out of the workshop and off I went.

Eduard's Albatros D.V kit provides



The components of the new Eduard kit. The first thing that strikes you are the vastly improved injection moulded main components. No more thick sprues and loads of flash

always had is on its way out.

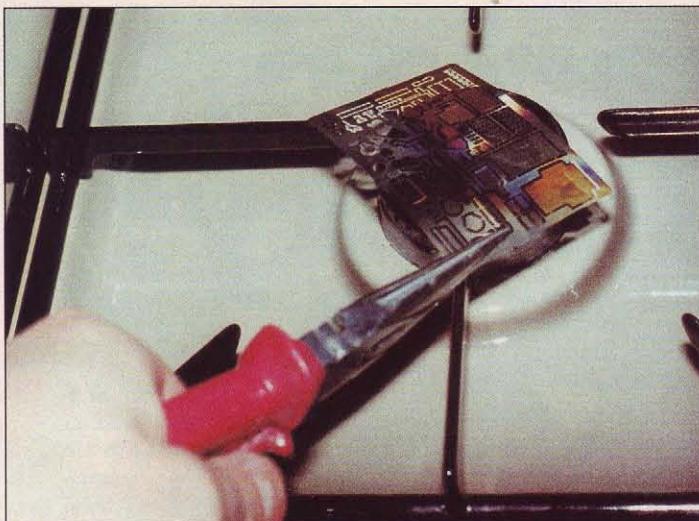
Another new addition to the kit is the etched metal. No longer is it just brass, but it is nickel plated as well. The engine is provided in the form of four beautifully made white metal parts. The instructions are in depth and informative listing all parts in outline

you with decals for two examples of aircraft; the black and white fuselage aircraft of Herman Goering which didn't inspire me too much, and Von Hippel's D.V of Jasta 5 which is probably the most common scheme of Albatros D.V around, so I wanted to seek out another, more daring example.

The perfect example for this model leapt off the Aeromaster decal sheet at me. Aeromaster produce two decal sheets for Albatros D.V called Albatros Collections One and Two (48-181 and 48-182 respectively). The part two sheet has another Jasta 5 example that settled the problem of choosing instantly. I have a passion for anything Bavarian and an Albatros with the Bavarian flag decorating the tail fin and rudder and with Bavarian colours on the fuselage and upper wing bought back memories of beer based holidays in the most fabulous part of Germany, so a Bavarian Albatros it was to be.

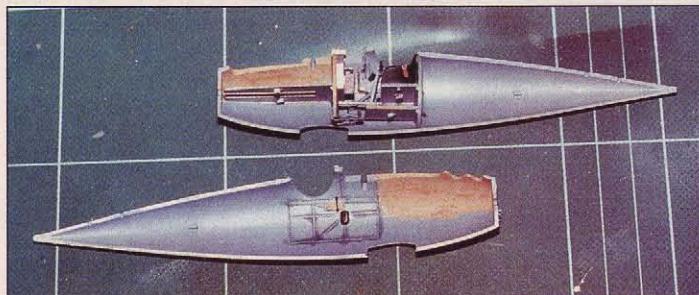
Stage 1

There is an awful lot of etched brass in this kit and around forty percent of it is for the cockpit area. Seventeen parts in the cockpit alone are brass while only nine are injection plastic. This is the first time I have actually built an Eduard kit (though several others reside in my unmade collection) and my experiences with lots of brass in the cockpit in the past has been that when all the brass has been added and the fuselage halves have been put together it wouldn't all fit, but this did which made a refreshing change. All the instruments, rudder bar, ammunition box and, yes, seat harness!! are etched brass, so there is an awful lot of folding, bending and shaping to do. This was made easier by first annealing



First task is to anneal the etched parts. Although they look like metal they are nickel coated brass. Heating the brass over a gas ring until the brass 'blushes' and then plunging it into cold water will make it far more malleable

the brass by heating it over the gas cooker jet and then quenching it in cold water. All the cockpit assembly was made up into sub assemblies and then sprayed Light Grey (XF53), then detail painted. The ammunition boxes were all painted Aluminium (Tamiya XF16), instrument panel and floor boards were Aeromaster Italian Tan with a Dark Earth drag-brush to give a plywood effect. Other bits and pieces were painted black, such as the pilot's seat etc. With everything glued, painted and dry the fuselage sides were put together and glued with very little fuss. I should also say that the engine bearer platform had been put in place and painted in the same way as the instrument panel (Tan and Dark Earth).

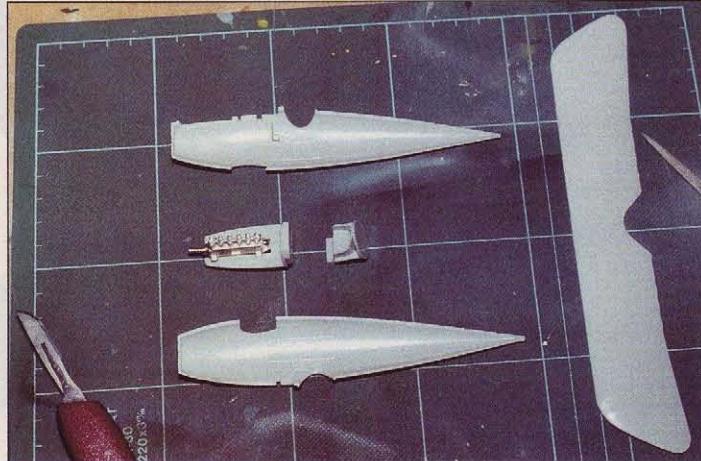


The completed interior. Note that the forward engine area has been pre-painted and that the moulded framework on each fuselage side has been brought out with a quick wash of black

Stage II

When building an aircraft model of this sort you really do have to think about when it is best and at what stage to put paint and decals on. This example had a varnished plywood fuselage with dark green engine cowls and a dark green tail area. The Aeromaster decal sheet provides you with a complete sheet of plywood decal! Great idea but I didn't know how I was going to get it on. Oh well, just dive in I suppose.

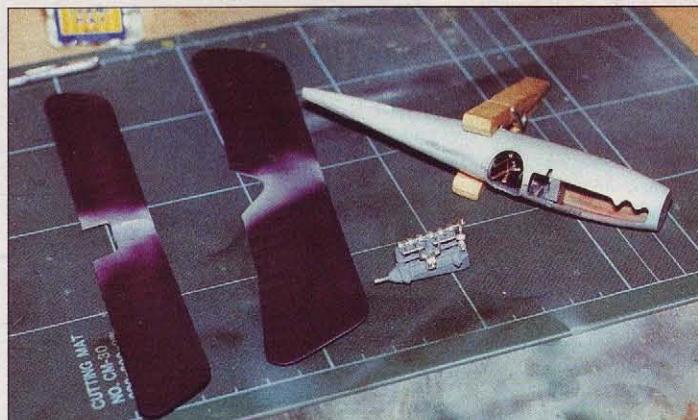
Firstly, after cleaning up the fuselage joins, I painted the engine cowls Dark Green giving a good overlap onto the decal area. I also decided to paint the leather cushion lining around the cockpit opening at this stage because I



The fuselage components, including the engine in its bearers and the seat and rear bulkhead, and the single piece upper mainplane

fuselage which at first covered the engine cowls and the tail. When settled with MicroSol the decal was trimmed away around the cowling and tail as before. This step was repeated for the other side of the fuselage.

The last two pieces were just academic by now, one piece aft of the bottom wing cowling and one forward, both being trimmed where necessary. One more piece would have to be added later though, when the bottom wing had been attached as the wings fitted into the fuselage, then the fuselage bottom would

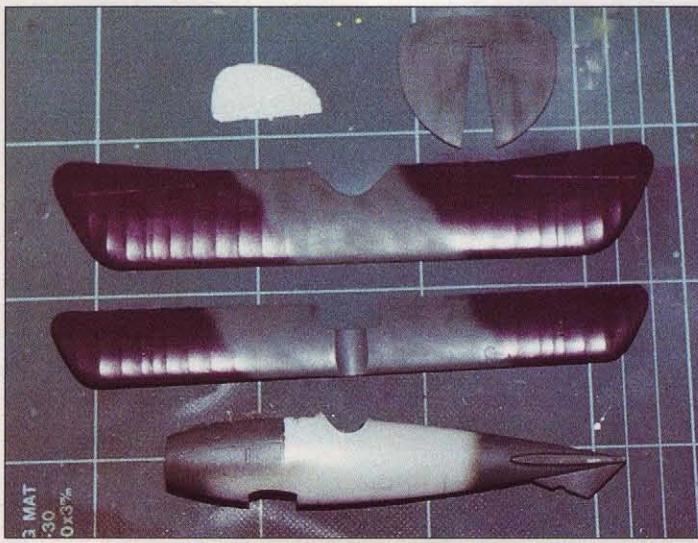


The fuselage is pegged together and left to dry. The completed engine is in the foreground and each mainplane has been sprayed with its first colour

have to be faired in with decal (so in the end it was actually eight pieces of decal).

Initially I had had my doubts about this plywood decal thinking that it might look a bit tacky and toylike and I was certainly more than a little concerned about whether the strips would match up. I needn't have worried, the effect that the decal gives is very, very realistic and what is more the strips blend together extremely well. In some areas I had to put patches on where I managed to tear holes in the decal and they don't even show up - Fantastic! I was on a decal high at this point so why stop decalling?

The band of Bavarian colours that wrap around the fuselage went on at this time and so did the iron crosses and red demarcation band between the dark green tail area and the plywood. When the decals were dry a good coat of satin varnish was applied. I had my first nasty moment when in my over excited state of mind I decided to put the Bavarian flags on the tail fin and rudder. This is a one piece per side decal and here I should have paid more attention to the drawings. If I had I would have realised that this was the only Albatros of the ten on the two decal sheets that had a different shaped rudder! Oh, Hell! I have never converted anything so quickly in my life. You see I didn't twig



The main sub-assemblies all pre-painted and ready for decal application. Note the front and rear sections of the fuselage are green, all the rest will be wood effect decals

until I had the decal on the fin and rudder and couldn't work out why it didn't fit. Off came the decal, out came the scissors and wet and dry, back on went the decal. Please, Please, Please watch out for that one if you decide to build this example.

Stage III

The wings in this kit are quite beautiful and need very little cleaning up. I found it best to pre-drill the wings to take the struts etc before painting. Painting was a pleasantly simple affair on this aircraft, Light Blue undersurface (Tamiya XF23), upper surface Dark Green (Humbrol 5030) and Mauve (a mix of Tamiya Blue XF8, 25% and Tamiya Red XF7 75%). The tail plane was also dark green and was painted at the same time. The wings were varnished with gloss acrylic and left overnight to dry.

And so the next day it was back to the decalling again. The upper and lower wings took their iron crosses without any trouble and on the upper wing a chevron in Bavarian colour was applied to the centre section.

The story had not finished with the upper wings as more etched brass was needed in the form of the wing mounted radiator. Two plates of brass, one either side of the wing, plus radiator shutters and handle and shutter

gear were all assembled, painted aluminium and Superglued in place. This was all rather fiddly but the result was very pleasing to the eye.

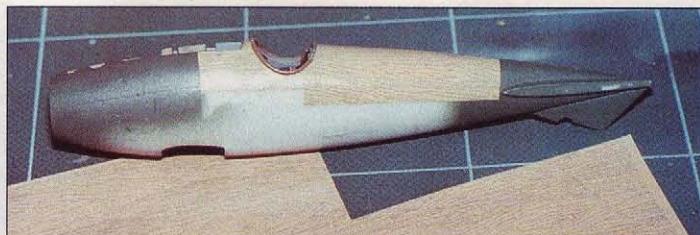
Stage IV

This was the bit I had been putting off, the machine guns. I had not been looking forward to rolling up the etched brass barrel sleeves in which the gun barrels sit. Well, for the first time in my life I managed to do it. I found some aluminium tube that was the right diameter and gently formed the brass around it, it worked! I immediately glued the sleeves to the plastic breeches and made up some gun barrels out of brass rod. The cocking mechanism and ammunition belts were all etched brass and all fitted beautifully.

The Mercedes engine in white metal needed a fair amount of cleaning up around the rockers but it all fitted together perfectly. I primed it with Holt's grey primer and then painted the cylinders Gloss Black (Tamiya X-1) and the engine block aluminium.

The engine fitted neatly into the engine compartment with a little careful manouevring and any further engine additions like the exhausts etc. were going to be left until the wings were in place to save any bother with the struts.

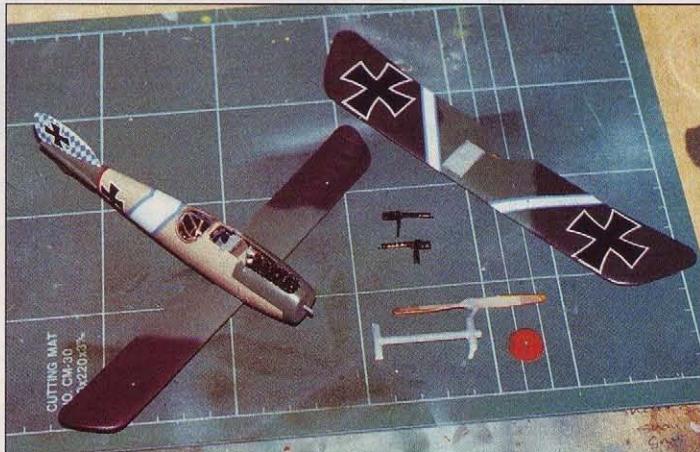
Fitting the machine guns was a little



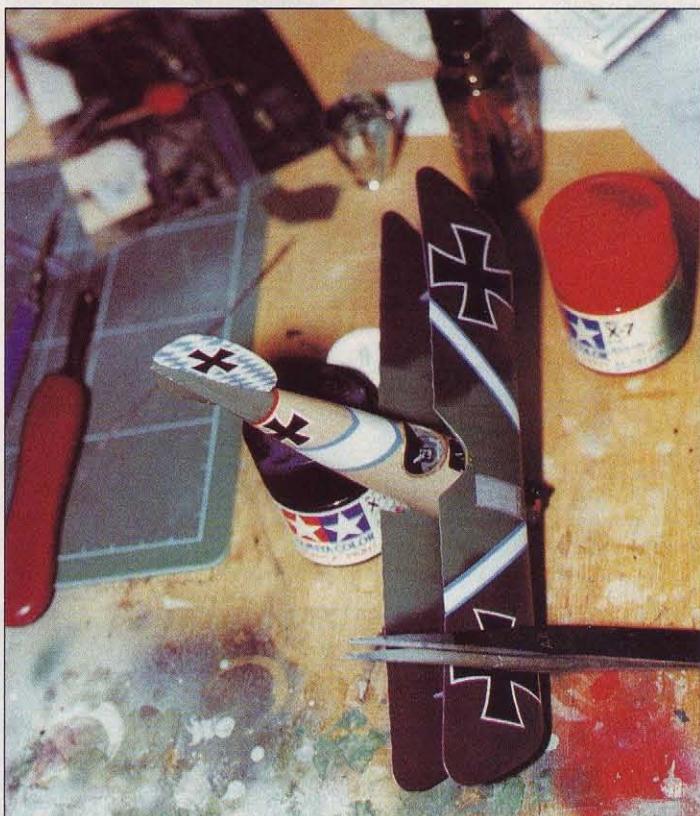
The decalling begins! The first section of wood effect decal to be applied was the over the upper decking



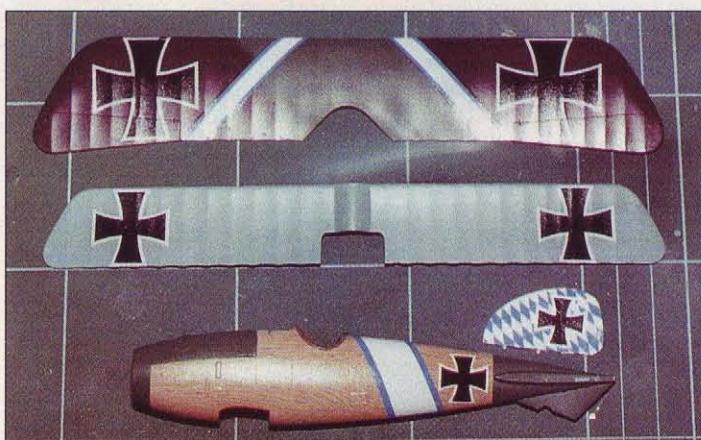
Job done. The completed fuselage. From this angle you would have no idea that the task took eight separate sections of decal



The engine once painted is added as is the lower mainplane. Also in view are the completed machine guns and the propeller and spinner



It may look odd but a combination of tins of paint and some tweezers allowed me to jig up the wings. Placing the model at this angle helped with the alignment of the wings



The upper and lower wings are now given their decals, as is the fuselage. Note the 'squared off' tail of this particular Albatros

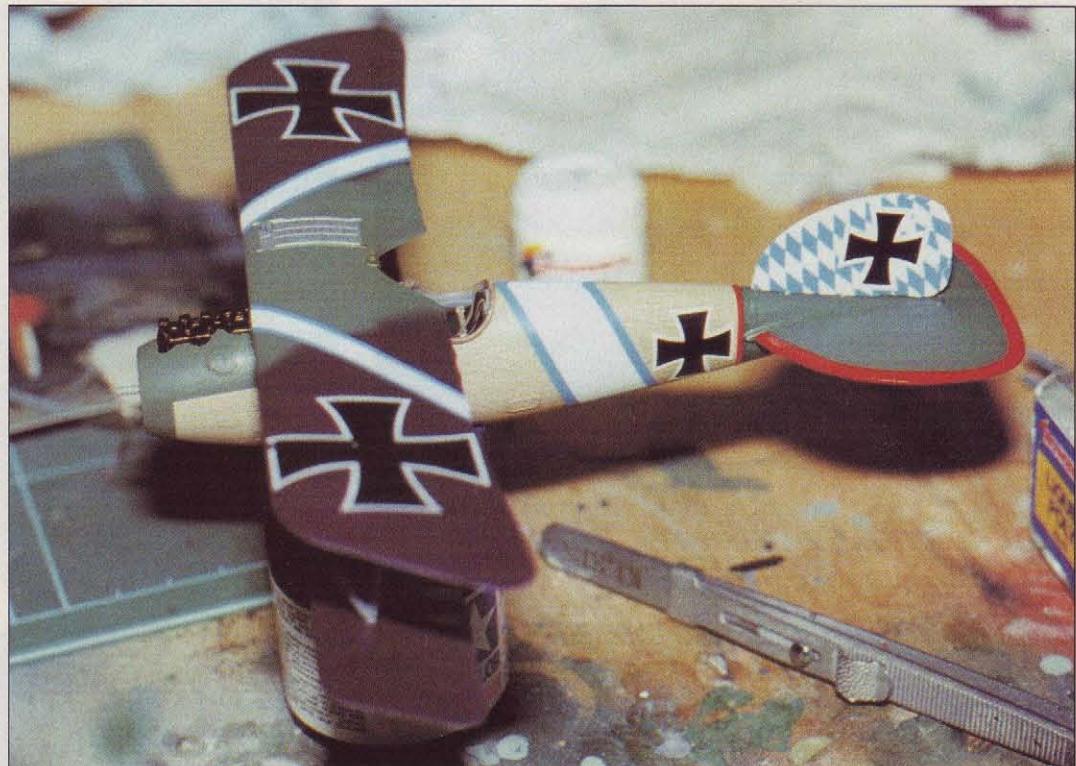
tricky as it is a something of a tight fit and you also have to bend and manipulate the ammo belts into the ammo box at the bottom of the fuselage. This did cause a bit of cursing and swearing.

Stage V

Okay, now it was wings time! The lower wings clipped neatly into the fuselage and were glued in with Liquid Poly. After a little while that eighth piece of plywood decal was applied to the lower piece of the fuselage that joined the one piece lower wing section. Once this had dried the Light Grey (XF53) pre-painted struts were put in place using masking tape and then glued with Liquid Poly and left to set rock solid before even attempting to mount the top wing on them. How many times have you gone 'forging' ahead with a biplane only to have the whole lot collapse on you. I know I haven't, honest guv.

Biplanes won't be rushed, even more so the larger they are in scale. No problems were encountered with the positioning of the top wings and the brass etched cabane struts slotted into place almost perfectly and were secured in place with a dab of Superglue.

The undercarriage was constructed on the bench while the wings were drying. All the location holes for both the undercarriage and the cabane struts had been drilled into the fuselage before the wings had been attached. The undercarriage sub-assembly dropped into place along with various little brass bits and bobs on the underside of the fuselage and wings and, with the addition of the tail and fin surfaces, the Albatros was drawing majestically to the end of its construction.



Nearly there. The tail in situ

of the unusual areas where I appear to excel. When my friend and now fellow reviewer Steve Ellen saw my Bavarian Albatros D.V fully rigged with stretch sprue, he said one word; "Git!". But, as with a lot of my models "Nice sprue rigging, shame about the varnish finish". Ah well, not to worry.

My technique is to heat the sprue over a candle flame, quickly and constantly rotating it until it is quite pliable. Then in one movement, draw the two ends of the sprue apart until your arms are outstretched. Now move



To ensure the undercarriage sits properly the model is hoisted up onto paint tins and left to set

my combination of Italian Hazel Tan and Dark Earth with the prop tips and leading edges being painted Humbrol Brass. Gloss varnish and the maker's plate decals finished off the prop a treat.

Conclusion

This was my first WWI era model for X number of years and I was very pleasantly surprised how kits and accessories for aircraft of this era had developed. I was especially impressed with Aeromaster's plywood decal which really does work extremely well even though this was my first attempt at it. One can only imagine the mess I would have got in if the decals had been made by someone else! (Note: The Aeromaster plywood decals are now

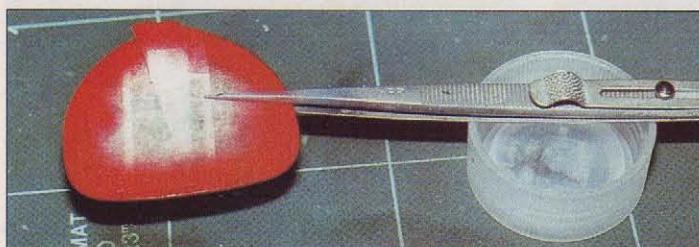
available separately-Ed).

Eduard's new Albatros D.V kit in 1/48th scale is superb and is more than worth its £12 price tag with its raised injection moulded plastic, nickel plated etched brass and gorgeous white metal engine. If you combine it with some of Aeromaster's equally superb decals you can achieve stunning results.

My Albatros, resplendent in its Bavarian flag colours and its plywood fuselage means I had got myself a sexy little Bavarian bird, weyhey!

My thanks to Four Plus for the Eduard Albatros D.V kit and to Aeromaster for the Albatros Collection decal sheets, one and two.

Mitch Thompson



The edge of the tailplane is red and this shot shows the unit, having been masked, with the red applied

Stage VI (Finishing Off)

The thought of rigging a biplane in any scale all too often strikes bowel evacuating fear into many a modeller, even more so if you have to do it with stretched sprue. Well it's time for me to show off because stretched sprue is one

your outstretched arms so the stretched sprue is hanging vertically. Use some masking tape to fix the sprue to a door or wall and cut what you need as you need it. Have fun!

The propeller and spinner went on last of all. The prop was painted with



Three views of a replica Albatross at Yeovilton

FOUR PLUS UK

DEPT. SAM, 29 Westwood Gardens, Hadleigh, Benfleet, Essex SS7 2SH
Telephone (01702) 559308

BOOKS

FROM 4+ PUBLICATION PRAGUE

MiG-21	£5.95
Su-22	£5.95
Mi-24	£7.45
Mig-23ML, the definitive book on the fighter versions	£7.95
MiG-29 All known versions	£8.50
Single Seat/Two Seat versions described in detail - 8 extra pages	£9.50

FROM WYDAWNICTWO MILITARIA

Hs-123	£5.95
He-60/He-114, Ar-95	£5.95
FW-200 Condor	£8.50

N.B. Text is in Polish with English captions for colour plates and drawings.

Zlínek: an English Language, Czech-produced series covering western and Soviet aircraft with excellent drawings, colour photographs and plates and informative text.
No 1 F-16 Fighting Falcon; Su-15 Flagon
No 2 T-38/F-5; Su-11 Fishpot-C
No 3 DH Mosquito; Su-9; P-63 Kingcobra
No 4 Siebel Si-204; Su-17
No 5 MiG-21PF; La-5
No 6 Avia S-199; Su-17M (Fitter C)
No 7 Gotha Go 145; U-200 Moravia; Two-seat Su-25 naval; MiG-23MF Hellfighter colour scheme
No 8 Tomáš operations; La-15
No 9 Soviet Hurricane operations; late versions Su-17/22

No 10 F-104 Starfighter; Su-2M Fencer; No.11 Su-17m3/Su-22m3; Tatra armoured cars.
Price £2.95 each plus 40p postage and packing. 60p for 2 or more books. Postage and packing: Books (except Zlínek) one, 75p, two 50p each, three 40p each, four 30p each, five books or more post free. Overseas one book 60p, two to four books £1.00, more than four £2.00.

NEW FOR JUNE

ART Resin and etched brass kits and conversions

We apologise to customers that have been inconvenienced by supply problems with ART products. These have now been resolved and all ART kits should be available by July. In the meantime we stocks of:-
ART 48018. Contains 2 x 1/48th kits of the famous Allison V-1710 block F that powered, amongst others, early Mustangs. £7.95

Model kits from Russia

1:72nd kit Bereznjak Isajev B1 experimental rocket and ram jet fighter. £3.50 (p&p 50p)

1:72nd modern Russian aircraft missiles and launch rails expected December 80p each set (p&p 1-3 sets 30p, 4-6 sets 50p, 7 sets and more post free

(1) CH-25MR and CH-25MT	(2) APU-68-UM2, CH-25ML, CH-25MP
(3) UB-32M/57 (two)	(4) UB-16/57U (two)
(5) B-13	(6) KMGU-2
(7) AKU-58, CH-29T	(8) AKU-58, CH-29T

These missiles are carried by the MiG-21, Su-22, Mi-24, Mig-23 and Mig-29. They are described with drawings and photographs in 4+ books.

Edward 1:48th kits

PKZ-2 1918 Helicopter expected June/July. TBA

Sopwith Triplane expected June/July. TBA

Classic Airframe 1:48th mixed media kits

Macchi MC.200. £18.95

Full list of Edward, Propagteam, Tally Ho!, Koster Aero Enterprises, Missing Link are available free of charge with an order or on receipt of an SAE.

TALLY-HO! DECALS

7001 Spitfire LF Mk.XVIe No. 443 (RCAF) Squadron	£1.75	7137 Netherlands East Indies (Flags), P-40N, B-25C/J, B-339	£2.50
7006 Spitfire LF Mk.XVIe Belgium 1947-52	£1.75	7140 Condor, Jagdgruppe 88, B aircraft	£2.50
7008 Netherlands East Indies B-339 Hawk 75A-7 CW-21	£1.75	7203 Ju-88A-1, A-5 (1940), KG4, KG30, KG51, KG54, 6 (a/c)	£3.25
7009 Hungary Fw 190F (3 a/c)	£1.75	7204 Ju-88A-4, A-5; Mediterranean LG1(F)121, KG54, KG77 (7 a/c)	£3.25
7013 La-9/11 North Korea, PRC, USSR	£1.75	7205 Finland Blenheim IV, Ju-88 etc	£3.25
7014 Spitfire Mk. Vb (Crop), 352 (Yugoslav) Squadron Bari, Italy	£1.75	7208 Bf 110C/E/F night fighters	£3.25
7015 Grumman Martlet, H.M.S. Formidable, Operation TORCH	£1.75	7209 Ju-88C Fighters	£3.25
7022 FAA: Grumman Hellcat, Atlantic/Mediterranean (3 a/c)	£1.75	7210 Do 217E/M	£3.25
7024 Gloster Gladiator: Norway, No 615 Squadron, RAF (France 1940)	£1.75	7212 Ju-88G night fighters	£3.25
7105 Brazilian P-47D; 1 Grupa Caca, Ninth AF, Italy 1944	£2.50	7213 Ju-88A-4/5	£3.25
7109 Arado AR-234, KG 76, etc 8 aircraft	£2.50	7215 Ju-88S/T, Ju-188A	£3.25
7110 Rumanian: Ju-88A, Ju-87D, Blenheim Mk.1 PZL, P.23, P.37B, Hs 129B, Ar 196A	£2.50	7218 Spain 1939-1950 Bf-109, I-15 etc	£3.25
7120 RN East Indies Fleet, Helicats (4 a/c)	£2.50		
7121 RN Eastern Fleet, Seafire Avenger, Helicat, Martlet	£2.50		
7122 RN Pacific Fleet, Corsair, Avenger, HMS Formidable	£2.50		
7123 RN Pacific Fleet, Helicat Mk.2, HMS Indomitable	£2.50		
7127 RN Eastern Fleet, Corsair (2 a/c), Kingfisher	£2.50		
7129 F6F-5N Hellcat USS Enterprise 1945	£2.50		
7130 Switzerland: BF-109D/E/G MS.466/D-3801, P-51D	£2.50		
7132 USSR: B-25 Mitchell (3 a/c)	£2.50		
7133 1930s China Gladiator, CR-32 etc	£2.50		
7134 Portugal: P-39D, P-38F, Mohawk IV, Spitfire Mk.1, Hurricane Mk II, Blenheim Mk.IV	£2.50		
7135 Finland: MS.406 (7 a/c)	£2.50		
7136 USSR: P-39N Airacobra, Pokryshkin, Klubov, Babak, Doinkov	£2.50		

FOUR PLUS ARE THE EDUARD SPECIALISTS

Eduard kits with etched brass detail sets

1/72nd	
07201 Sopwith Schneider	£7.95
07202 Sopwith Baby	£7.95

07203 Fokker D.VII	£7.50
--------------------	-------

1/48th	
--------	--

Fokker D.VIII	£11.95
Hansa Brandenburg D1	£11.95
Sopwith Baby (3 version)	£13.95
Maurane Saulnier "N"	£11.95
Hannover CL IIIa	£19.95
Maurane Saulnier "L"	£14.95
Albatros C.III	£19.95
Sopwith Pup	£11.95
DFW-28 Flieh	£9.95
Fokker D.VI	£11.95
Albatros D.V	£11.95

Etched Brass Detail Sets	£11.95
--------------------------	--------

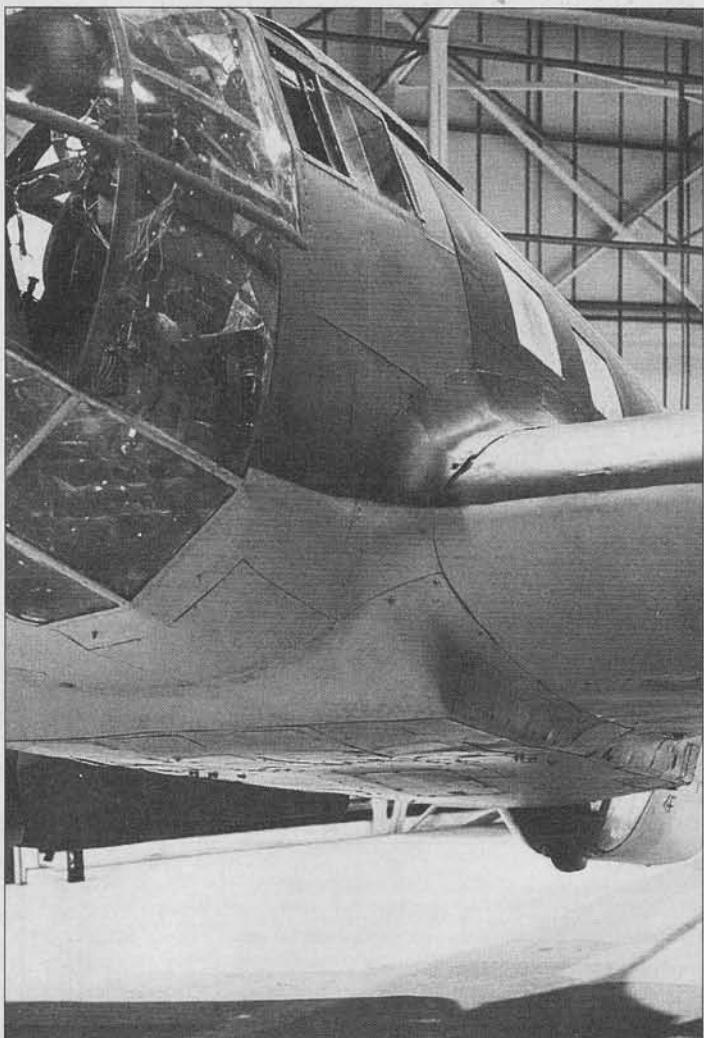
72-161 F-16B	£6.45
72-165 Kananishi N1K1	£5.45
72-166 B-25B/C Mitchell	£6.45
72-167 CH-47D Chinook	£8.45
72-168 S-3B Viking	£6.45
72-169 He-111H6...	£6.45
72-170 B-17 E/F/G Bomb Bay	£6.45
72-171 B-17 undercarriage	£6.45
72-172 B-17E/F Int.	£8.45
72-173 B-17 landing flaps	£6.45
72-175 Ki-43 Oscar	£3.45
72-176 He-111 Bomb Bay	£6.45
72-177 I-16 type 18	£5.45
72-178 Do-17Z Interior	£6.45
72-179 Do-17Z Exterior	£5.45
72-180 SAAB Draken	£5.45
72-181 T-28 Trojan	£5.45
72-183 J7W1 Shinden	£5.45
72-184 Arado 234C Blitz	£5.45
72-185 He-162 Spatz	£4.45
72-186 Hornet IX	£4.45
72-187 Su-22 UM	£5.45
72-188 A7E Corsair II	£6.45
72-189 F-117A	TBA
72-190 A-4M Skyhawk	£5.45
72-193 B-24 Bomb bay	£8.45
48-134 A-36/P-51B	£5.45
48-135 P-40N	£6.45
48-136 Jaguar Gr.1	£6.45

48-137 Jaguar A	£6.45
48-138 He 111H int.	£8.45
48-139 He 111H ext.	£4.45
48-142 SBD Dauntless	£6.45
48-143 SBD-4 Dauntless Flaps	£6.45
48-144 Avenger TBM-1c Bomb Bay	£6.45
48-145 Avenger TBM-1c Ext.	£6.45
48-146 Avenger TBM-1c Int.	£6.45
48-147 Ju-188E	£8.45
48-148 Ki-61 Heini (Tony)	£5.45
48-150 Su-27 Flanker B	£6.45
48-151 A-20B/C Havoc	£6.45
48-152 NK1 George	£5.45
48-153 Me-262A Schwalbe	£6.45
48-154 FW-190A3/A4	£6.45
48-155 F-14A Tomcat	£6.45
48-156 S-3A Viking	£6.45
48-157 Mosquito FB V1	TBA
48-158 Avia S-199	£5.45
48-159 Horten 1X	£5.45
48-160 AH-64A Apache	£6.45
48-161 F-117A Int.	£5.45
48-162 F-117A Ext.	£6.45
48-163 MC 202	£6.45
48-164 MC 202 flaps	£4.45
48-165 A-7E Corsair II	£6.45
48-166 Hs-129B	£6.45
48-167 Fw-190D-9	£6.45
32-001 German Buckles	£3.95
32-003 Hurricane	£3.95
32-004 Fw-190D	£3.95
32-005 Fw-190 flaps	£4.95
32-006 Soviet jet buckles	£3.95
32-007 MiG-29	£3.95
32-008 USAF Buckles	£3.95
32-009 MiG-29 UB	£4.95
32-010 P-51D Mustang	£4.95
32-011 F6F Hellcat	£3.95
32-012 Bf-109G-6 Ext.	£6.45
32-013 P-51B Mustang III	£6.45
32-014 Bf-109G-6 Ext.	£6.45
32-015 F4F-4 Wildcat	£6.45
32-016 Bell AH-1G Cobra	£6.45
32-017 P-40E Warhawk	£8.45
32-018 A6M Zero	£8.45
32-019 Bf-110G-4	£6.45
32-020 Bf-110G-4	£6.45

Kits 1/72nd UK: 1 kit 60p, 2 kits £1.20, 3 kits or more, post free. Kits 1/48th UK: 1 kit £1.00, 2 kits £2.00, 3 kits or more, post free. EEC, all kits by Credit Card at cost, otherwise 10% of order. Other countries, at cost by Credit Card, otherwise 15% of order. N.B. brass sets and decals are sent post free when ordered with kits.

PAYMENT NOW ACCEPTED BY VISA AND MASTERCARD

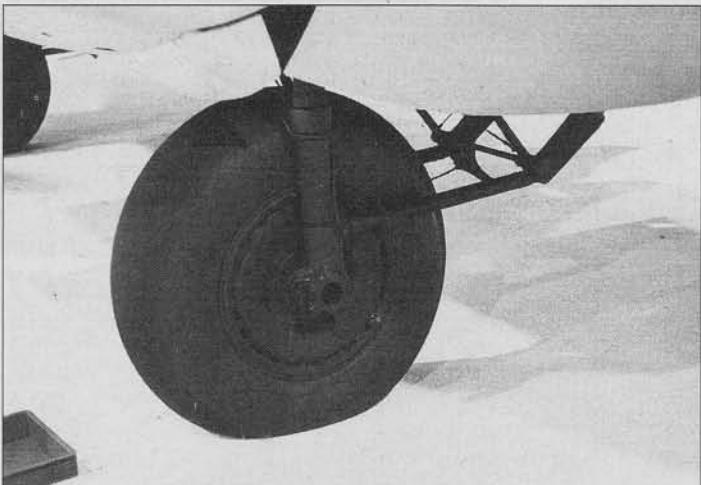
P&P etched brass and decals (U.K.) 1-3 sets 30p, 4-6 sets 50p, 7 sets or more post free. EU by Credit Card at cost otherwise any quantity 75p. Other Countries, by Credit Card at cost, otherwise £1.50 for any quantity.



The number of bomb bay doors are visible in this shot of the underbelly

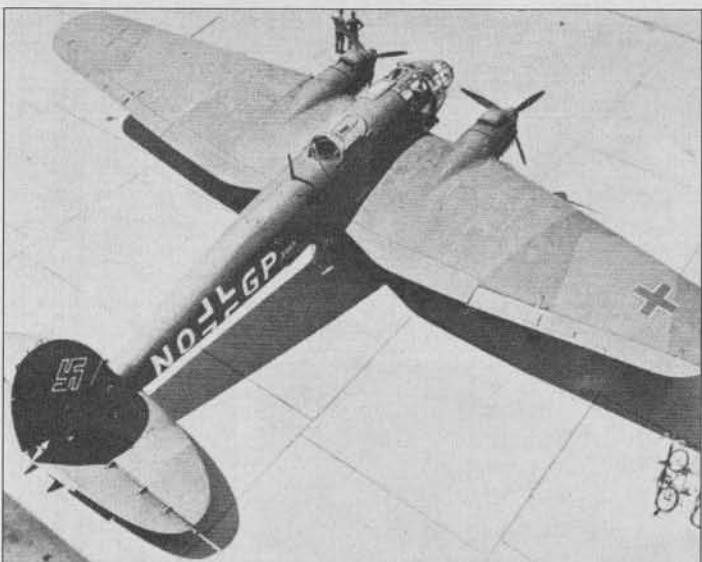


This war time shot of an operational He 111 shows just how large the under surface crosses were

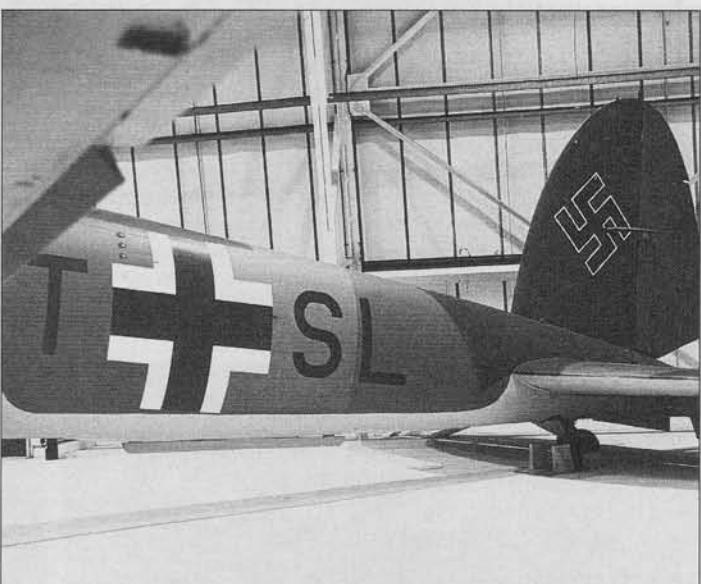


The rather sturdy main undercarriage unit of the He 111. Note just how near to the ground the undercarriage doors are

A HEINKEL *that's different*



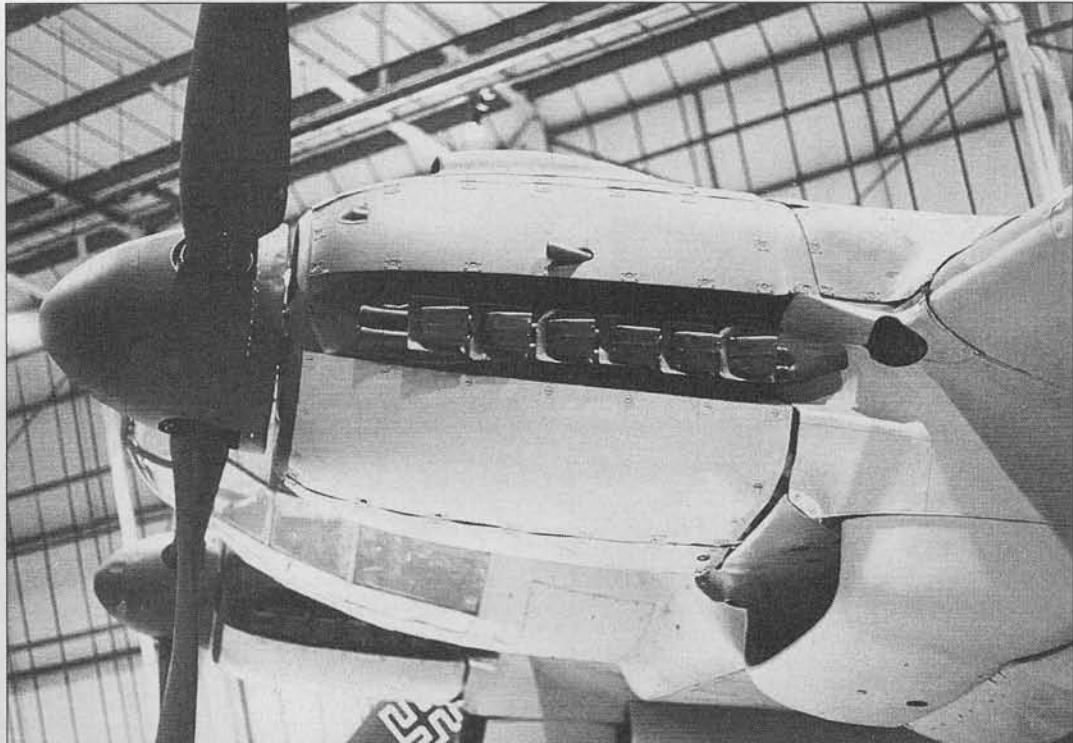
Top view of the He 111 P-2. This machine is in a pre-delivery scheme and therefore carries factory call signs of NO+GP on the fuselage. Note how the werke Nr. is carried in white forward of the codes



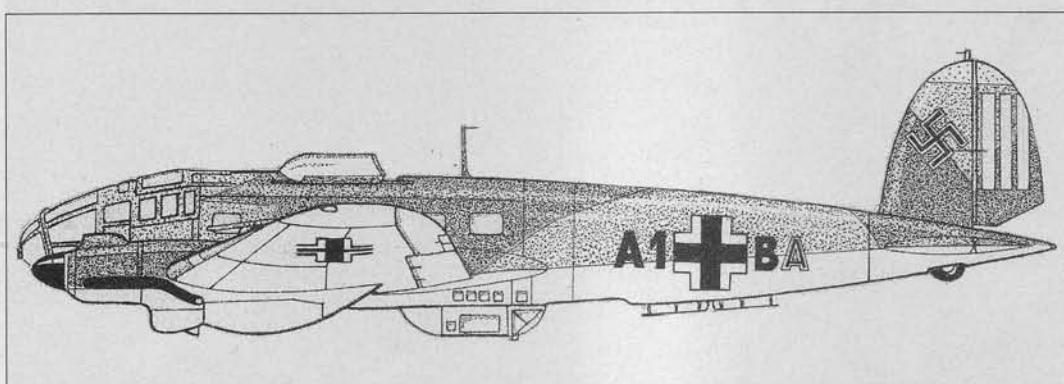
Rear fuselage showing size and relative position of the codes, national insignia and swastika

Only the most casual visitors to the RAF Museum's Battle of Britain Hall - those for whom the name of "bomber" and "Heinkel" are synonymous - would assume that the specimen on display is the former. Long believed to be an H-23, there is now strong evidence that suggests it being an H-20 version (N.B. The recent removal of one of the wings of this aircraft by museum technicians proved this to be so, as the werke Nr. plate on the spar is clearly marked as an H-20 - Ed) of the He 111, so that 701152 is most likely an example of the Heinkel transport, the deletion of the internal bomb racks and the fitting of a pair of benches enabling sixteen men or five stretcher cases to be carried.

Our photographs this month show a variety of interesting details for the modeller seeking information to make his latest piece of work "different", the first being the close-up of the Jumo motors, valuable because so many preserved specimens are re-engined with



The Jumo powerplants of the late series He 111 and the broad style propellers are of note



Merlins (examples produced by CASA in Spain).

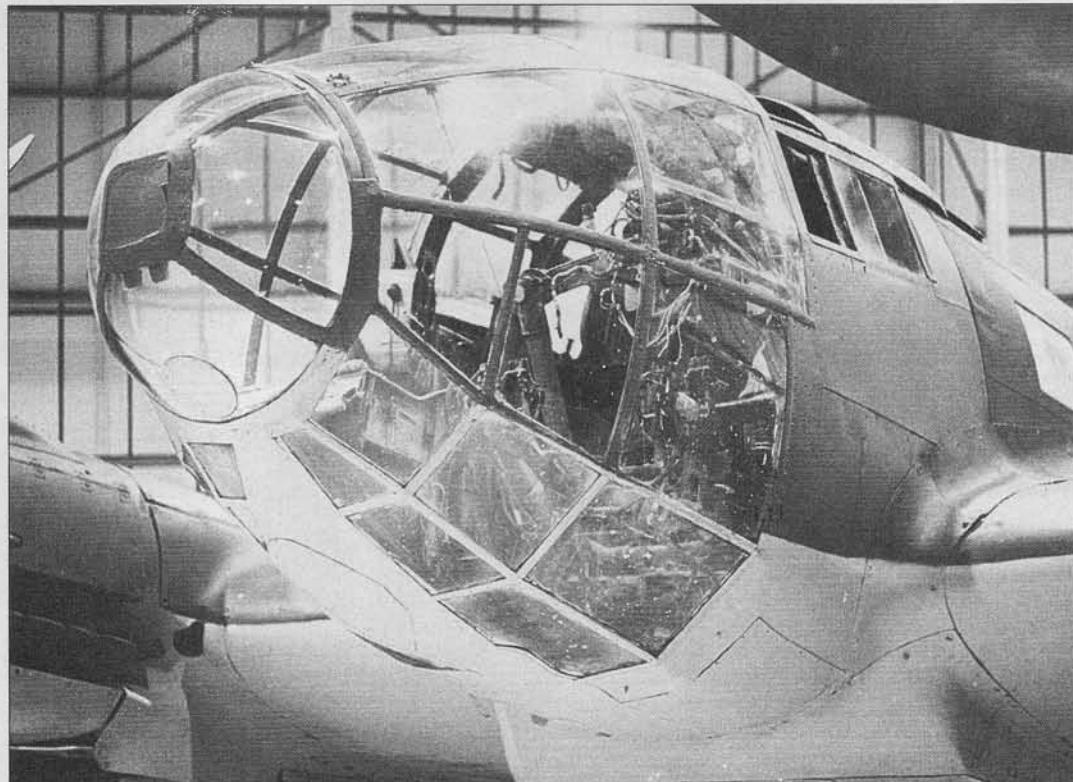
The side view of the rear fuselage carrying the authentic lettering "NT+SL" shows the correct proportions and spacing, while also of note is the location of the swastika on the fin, only a small number had this differently sited, although the film "The Battle of Britain" wrongly perpetuates the idea that a non-standard alignment was commonplace!

Undercarriage details illustrate the sturdy nature of the landing gear, this proving of value after France was overrun and operations were mounted from the captured airfields which had surfaces leaving something to be desired.

The nose shows the familiar extensive glazing and the blanked off forward gun position, this also serving as a reminder that originally this example would have carried a glazed dorsal turret, an innovation that replaced the long transparent windshield associated with the first variants. This is shown in the line drawing which illustrates the bomber version in use during 1940 carrying

the three vertical yellow bars on the rudder which denoted the Gruppe. These were frequently carried inboard of the national marking of the starboard upper wing surface, rather thick and across the span. The top view of Werke Nr. 3107 NO+GP, a P-2, shows the small black crosses well out on the wing tips, while the flying view makes clear how large these were underneath.

Peter Cooksley



Good view of the extensively glazed nose of the He 111. The position for a machine gun in the extreme nose is blanked off and the pilots side window and top hatch are in the open positions

Colour & Marking Notepad

by
Michael Payne

Photo 1

J7892 was a Gloster Gamecock of No. 23 Sqn., a portrait painted for the late Wing Commander Norwood. The colourful squares of the unit markings were repeated across the upper wings, on which the roundels extended over the ailerons. Rear fuselage serials appeared in a Silver-doped box and the badge on the fin was in black; an eagle with prey in its claws.

The fuselage decking from the to aft of the cockpit was black as an anti-dazzle measure. Some later aircraft substituted Nivo (Dark Green). My client asked for the yellow flight colours on wheels and spinner cap.

In order to contain aileron/wing tip flutter experienced in high speed dives most aircraft were later fitted with extra V-struts springing outwards from the lower wing strut attachments. All Gamecocks, I think, were fitted with navigation lights for night fighting. The Unit was based at Henlow and Kenley.

Photo 2

Serving in the Fleet Air Arm of the RAF from 1923 until 1935, the Fairey Flycatcher was a remarkable Fleet fighter with a speed range between 47 mph and 133mph and an extremely short take-off run. It was also very noisy since it flew with open exhausts.

This photo of N9619 records a painting made some years ago for the late Sq. Ldr. F. Fletcher who performed the deck landing trials on HMS Argus. The colours and markings were in accordance with his request and I had good reason at the time to believe that he had access to private photos as well as to his Flying Log. Note the yellow inner surfaces of the front struts on the undercarriage; and modellers should note that prior to late 1929/early 1930 it was the blue stripe that lay next to the rudder hinge. Some modellers will have seen the modern replica Flycatcher, often flown at air displays by Mr John Fairey.

Photo 3

K2080 was a second batch production Fury which was retro-fitted with a tail wheel. It served with No.43 Sqn. at Tangmere - the Fighting Cocks, so named after their badge carried in the regulation spearhead on the fin. This

painting was made for Wing. Cdr. J.I. Kilmartin, who had flown with No.1 Sqn at Tangmere and in France, and who joined 43 to fly Hurricanes in the Battle of Britain.

Early Furys were marked with checkerboards in black and silver squares, but later machines appear to have adopted black and white colours on fuselages and upper wings. Forward of the aluminium doped fabric airframe, the metal engine cowlings were always kept immaculately polished.

Only three Squadrons flew Furys for a length of time.... Nos 1, 25 and 43, though Nos 73 and 87 flew them for a few weeks in 1937. These wore no coloured unit markings.

Photo 4

Gladiator K7962 was painted in the colours of No. 73 Sqn when based at Digby in 1937-8, painted from a photo attributed to R.C.B. Ashworth. The blue and yellow spearhead marking was repeated twice across the upper wings,

yellow identity stripe on the wing leading edge and the various information stencilled on the rudder and above the fin flash.

From the time it came into service with No. 56 Sqn the Typhoon suffered from 'recognition' problems, being frequently mis-identified as a Fw 190 especially when it operated low level over the Channel and the South Coast. All white noses proved unpopular with the pilots and were removed but 15 inch yellow chordwise bands remained on many Typhoons throughout 1943, on upper surfaces at half span. There was remarkably little exhaust gas staining on TP-R. (A J Cranston)

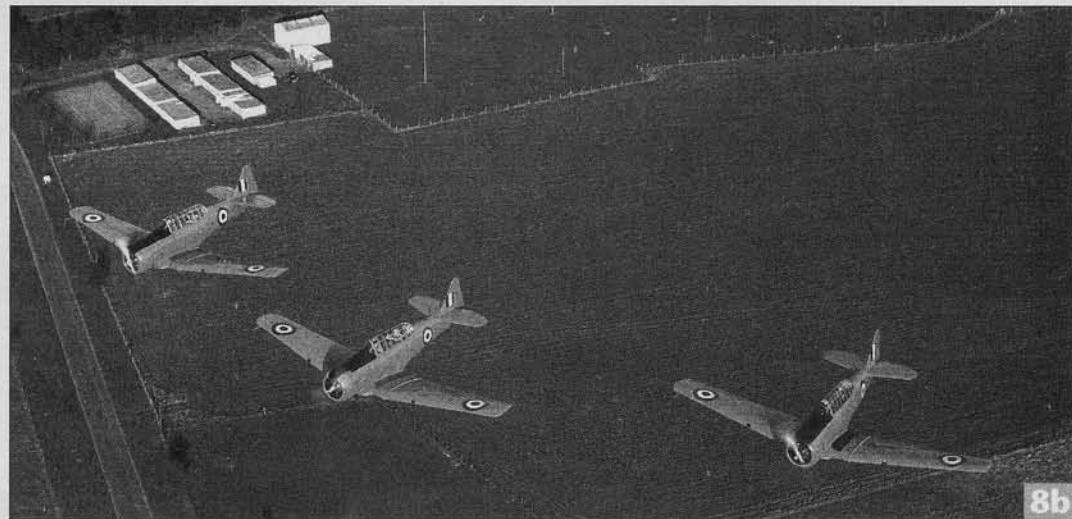
BR. Refreshments are carried in a large white cool box located against the cockpit bulkhead. (Author)

Photo 8

Once upon a time there were three Harvards at Boscombe Down - FT375, KF314 (which was destroyed in a crash near Chicksdene), and KF183 which is still flying. Their function was to carry a photographer using a hand held camera to record the behaviour of parachute loads and stores dropped from other aircraft. One saw an Argosy or a Hercules closely shadowed by a Harvard flying over the Salisbury Plain ranges. KF183 has five apertures under the rear fuselage. At one time three lines of lettering were below the front cockpit;

Aircraft & Armament
Experimental Establishment
Boscombe Down

The standard markings and serial appear on the gloss yellow paintwork and the anti-dazzle panel is matt black.



8b

the business ends aimed exactly at the centre spots of the small roundels. At this period the large wooden fixed pitch propellers did not carry spinner caps. Serial numbers would have appeared beneath both lower wings in about 24 inch characters. The squadron received Hurricanes in July 1938.

Photo 5.

This Typhoon Ib, JR371 belonged to No. 198 Sqn (later to 184), seen here in generally standard colours and markings for 1943-44; Ocean Grey, Dark Green and Medium Sea Grey. Wheel covers show that it carried the black and white ID stripes usual on Typhoons. These are not to be confused with the totally different D-Day stripes. Codes, spinner and tail band were in Sky, the codes and the underwing tank in much less faded colour. The black on the spinner was a feature of No. 609 Sqn, but unusual on other units. Early Typhoons with the 'car door' cockpit usually had a radio mast rising through the rear transparency, later modified to carry a whip aerial on the rear fuselage. Neither is visible in this photo. Note the

entirely normal, with yellow trainer bands on wings and rear fuselage. Fin code GN denoted Eglinton; it was black like the side number 910. Note that the foothold guides were painted red, and in its time at Yeovilton the aircraft did not carry the inter-cockpit periscope, nor did the T20 have a deck landing hook. Modellers note the outboard position of the underside roundels and the far inboard position of those above the wings. (Author)

Photo 7

VX733 is a Wessex of the Queen's Flight in its red finish with black and white trim. Struts and flotation packs on the wheels are Light Grey. The two jet pipes are shiny steel. Small Union Jack flags up on the fin have narrow white borders and the Royal Cypher etc. appears low down on the starboard side door and high up on the port side between the two forward windows. The upper surface of the rotor blade is painted yellow.

The interior is carpeted and upholstered in RAF blue with bench seats at a table like the open coaches on

Photo 9

Javelin XR897 was the noted chase plane operated by the A&AEE Boscombe Down some years ago. I last saw it in retirement at Duxford. It had been stripped of non-essential equipment and it was fairly lively to fly. It was in A Squadron - hence the A on the nose cone and painted in a high visibility scheme of roundel red and white (which I shall not attempt to describe) with markings and serials in standard locations. Areas around the cockpit were matt black to reduce glare. Fore and aft cockpit frames were painted white. the extra red tanks were fitted permanently. I am unable to identify the background view, but it is certainly not Salisbury.

This Javelin succeeded a previous chase plane WS838, a Meteor NF.14 which was painted in overall yellow with a black radome nose. It was in use in 1971; I saw it in retirement at Colerne. (It is now held by the Midland Air Museum although it belongs to the RAF Museum-Ed)

Michael Payne





F-84 *Thunderstreak*

The United States Air Force operated several types of jet aircraft in the Korean War and among them had been the Republic F-84 Thunderjet - a straight wing aircraft. The Thunderjet had first flown on February 28th, 1946 and production was to run to 4457 aircraft, many of which gave valuable service before the arrival of the F-86 Sabre in Korea. The original plan had been to operate the Thunderjets as escorts to B-29 bombers but in fact the 27th Fighter Escort Wing were put to work on close air support and interdiction missions.

As with all successful types development potential has to be explored and the designers at Republic evolved the F-84F Thunderstreak as a result. Apart from a slightly similar appearance the two aircraft had little in common, the F-84F having an uprated Wright J65-W-3 turbojet which required an enlarged and improved air intake. This resulted in the F-84F taking on a very curvy appearance and together with the swept wings, Mach 0.91 was attained at sea level.

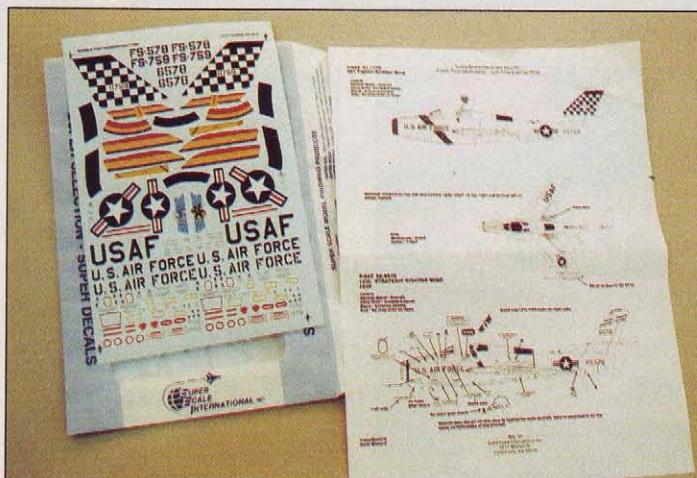
This aircraft was also capable of carrying four 1000 lb bombs or twenty-four 5" HVAR missiles and was equipped with six 0.5 inch guns which also made it a quite capable interceptor. Range was 2,500 miles and the climb rate 8,200 feet per minute with a ceiling approaching 50,000 feet. The USAF not

surprisingly ordered it into production for its squadrons and a total of 2,711 were built. A further development, actually in parallel with the F-84F was the RF-84F, a reconnaissance machine which incorporated a six camera bay in the nose of the aircraft, which required wing root intakes for the engine.

With NATO expansion taking place in the early fifties many member countries were obliged to turn to the United States for the purchase of aircraft for their fledgling air forces and the F-84F was subsequently put on offer. With its dual ground attack and interceptor capabilities it was ideal to counter the threat from the Warsaw Pact in Europe and the type was adopted by France, Belgium, Holland, West Germany, Italy and Greece.



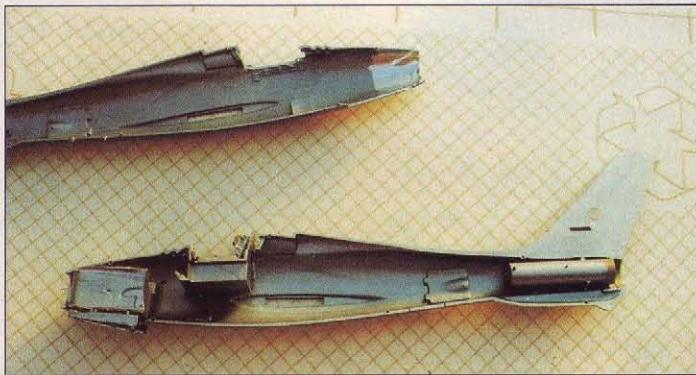
Monogram Kit



Superscale decals

The Kit

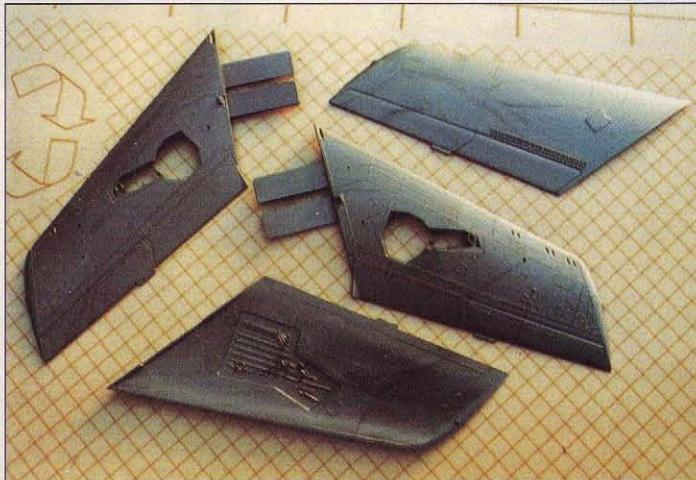
While the Monogram kit has been around for some time this latest version has been reworked and the value for money is quite astonishing. To get a 1/48th scale model with this amount of detail for under ten pounds is incredible and I hope the rest of the range prices can be maintained at these levels. The cockpit area is very good, a pilot figure is included for those who like one for scale effect, and besides a fabulous set of underwing fuel tanks there is also a bomb trolley with load. The decals are for West German or Dutch machines, both versions of which will provide a very colourful model.



Intake, cockpit and jetpipe



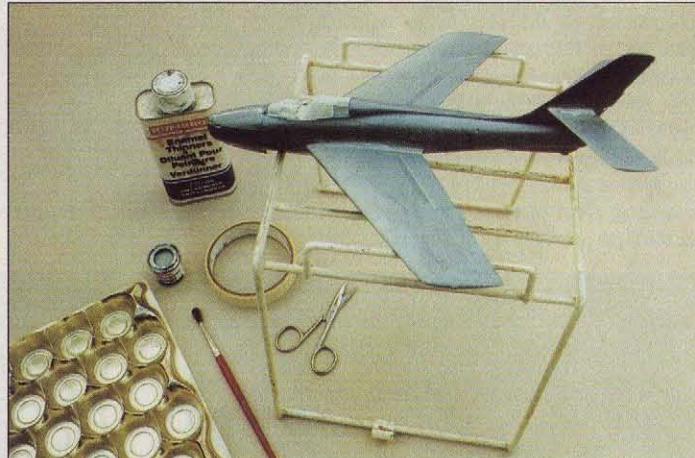
Cockpit and nosewheel bay



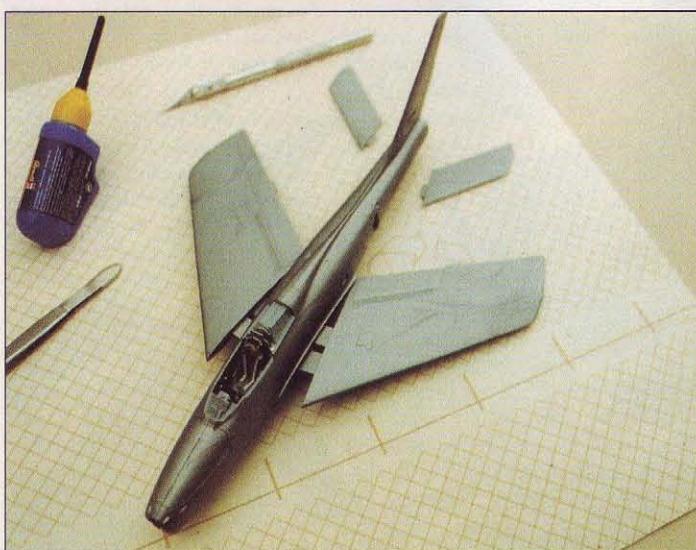
Wing components



Joints filled and sanded



Masked ready for painting



Wings slot into fuselage

However, this machine looks best to me in gleaming aluminium and USAF markings - a classic fifties jet fighter if ever there was one! In order to finish this model in USAF colours I resorted to decal sheet number 48-256 from the SuperScale range which offers a choice of machines, one from the 401st Fighter Bomber Wing and the other from the 12th Strategic Fighter Wing. Both the SuperScale and the supplied decals include a comprehensive set of warning signs and stencil data to literally cover the natural metal finishes, all of which looks very good on a large scale model.

The construction is conventional with a vertically split fuselage and the wings have large location tabs which interlock inside the assembled fuselage giving a lot of added strength to the model. They slot together quite neatly and present no difficulty in assembly, leaving just the tailplane and detail items to reach completion.

Monogram supply a three piece cockpit canopy giving a choice of open or closed positions and due to the amount of detail in the cockpit there was only one option for me. There is an excellent detail set available in the Reheat etched brass range as an option but I pressed on without one in this case to illustrate the level of Monogram's built-in efforts. All fuselage and wing panel

lines are slightly raised giving unobtrusive but effective interest to the painted model.

Construction

After cutting all the main components from the sprues and cleaning the edges with a craft knife the fuselage and wings were immersed in luke warm washing up suds and then rinsed and dried. You can leave the components to dry off naturally to avoid static electricity build up but I dried them with paper towel in a blotting paper fashion. The fuselage and wings were all quite 'flash' free on my model so the X-Acto knife was only required to clean the sprue attachment points. The wing leading edges received just one pass with the knife to remove a tiny amount of excess plastic.

I am sure many modellers do shampoo the components before work starts, for some time I never did, but it does benefit good construction. Not only does it improve paint adhesion and therefore finish it also aids the effect of all the glues that have to be used, particularly in mixed media construction. In the case of the Thunderstreak the only metal used was a small bolt superglued into the top of the intake splitter as nose wheel ballast. There was no advice on this in the instructions but I thought better safe than sorry and end up with a tail sitter after all the hard work.

Fuselage

Monogram have combined the engine intake splitter with the nose wheel bay and even the nose wheel bay doors are



Fitting undercarriage and ordnance pylons



Ordnance and trolley components in kit

cleverly incorporated in the same sub assembly. This in particular saves a lot of fiddly fitting of the thin doors which always seem to be a struggle to get right. With this assembly cemented into place in the nose the cockpit tub can be located immediately behind.

To improve the ejection seat I made up seat belts from microstrip and then concentrated on the painting in of detail on the side consoles and main instrument panel. This latter item is matt black and to depict the instrument dials I find it best to use a pin head dipped in gloss white and then applied to each spot. Practice this on a scrap piece of plastic until you get the right paint amount for the size

of dial required, but even if it goes wrong I simply repaint the panel black and start again.

All of the cockpit area and floor etc. was painted in matt light grey with the side consoles picked out in black also. The outer rim of the instrument panel was aluminium and the seat headrest matt tan. With the finished tub in place on the location shim it only needed the tail pipe to be put in place which takes up the last two inches of the fuselage. The interior of this was painted in black tinted copper to give a burned metal effect at the jet nozzle outlet. There is a neatly moulded pilot figure included in the kit but I suspect one of the new scale figures from Elan would give a better scale effect stood outside the aircraft.



Canopy components



The Wings

As mentioned the wing location tabs interlock inside the fuselage and the tailplane also fits in a similar fashion. Before the wings are pushed home the tabs should be well covered in Liquid Poly to ensure strength, in effect the model has its own main wing spar. Also, before fitting I removed the wing tip lamps with a craft knife as these are moulded 'solid' and can be replaced at the detailing stage with something like Humbrol Clearfix.

The tailplane was fitted next and when all was dry any joint lines were filled with Squadron White Putty and then sanded down smooth. I then wiped all surfaces with a tissue dipped in paint thinners to remove any residue dust and placed the model on a small metal stand ready for painting. On this occasion I decided to use a paint brush instead of an air brush and thinned down some Humbrol No. 11, aluminium, by about thirty percent, again using Humbrol thinners.

Using a Humbrol No.8 brush, which is quite large, the model was quickly painted and placed on the stand to dry for at least 24 hrs. The cockpit area was masked off prior to this and the undercarriage components were prepared while the first coat dried. I find that whichever brand of aluminium paint I use it takes a long time to dry thoroughly so by the time the second coat was dry most of the detail work on sub-assemblies had been completed.

Undercarriage and Ordnance

There is a lot of nice detail on the main undercarriage and nose wheel and all three items fitted very snugly into place ensuring that the model is well supported. The very wide track of the main undercarriage on the F-84 is a distinctive feature and certainly adds to the aggressive appearance of the aircraft. This was probably also a consideration on the real aircraft due to the amount of weight of ordnance it was designed to carry and the same goes for Monogram's kit.

Four wing pylons are provided and the choice is four huge wing tanks or two tanks and two bombs or less. Whether the F-84 was in the S.A.C. fighter role or being configured for ground attack it certainly had great versatility in the best tradition of Republic's "Thunder" series of heavy-weight fighters.

The choice of decals was hard but I finally settled for the checker tail of the 401st Fighter Bomber Wing and will probably make another so that I can have the S.A.C. fighter as well! Some of the decals were slightly brittle to handle, so take it slowly and make sure that they go

onto a good gloss surface for easy positioning. The entire model was later coated in Johnsons 'Kleer' floor polish which both enhances the natural metal finish of the F-84 and seals in the decals permanently. There is a mass of stencil data decals as one would expect in this large scale but having put on the stars and bars and check tail I decided to leave them until last and carried on with some other detail work. In any case, make sure the underwing decals are in place before you fit the outer bomb pylons as they both occupy the same position on the wing.

Completion

The fuselage mounted air brakes were next put in place and both required some attention with a file to ensure a flush fit. Two undercarriage leg support struts also had to be fitted and while these items were drying I finished off the ordnance support trolley and painted it in another coat of gloss yellow. Also, at whatever stage suits, an anti-glare panel in front of the windshield should be painted in Olive Drab, a panel on the fuselage spine is matt black and the two inboard portions of the flaps are finished in gloss red. All of these are well indicated on the instructions and that left just the cockpit canopy and aforementioned stencil decals.

The canopy comes in three sections, windshield, main canopy and a rear section. All were put in place with Humbrol Clearfix and the canopy has two support arms that enable it to be propped in the open position. These both benefit from some attention with a small file to reduce the thickness and they are a potential menace to getting glue on the clear canopy. However an open canopy is essential for appreciation of the interior.

All of the stencils are well indicated on the SuperScale instructions and then the model was coated with Kleer and left to dry thoroughly.

This Monogram kit represents excellent value, especially if you are new to the hobby as it gives stacks of detail with straightforward construction. The supplied decals are quite good but I have a liking for aircraft in their original guises and also remember making an early odd scale offering from Revell back in the fifties of a USAF F-84.

All in all, a very shapely aircraft and I shall try the Reheat set on another one and make myself a Strategic Air Command example which will probably start me thinking about Dr. Strangelove and all that!

Colin Peck

P&P 10% UK, 15% EUROPE, 20% OVERSEAS
NON STERLING CHEQUES ADD £2 FOR BANK CHARGES
160 GREEN ST, ENFIELD, MIDDX



SCALE MODEL ACCESSORIES LTD

DEDICATED TO ACCURACY & QUALITY, SUPPLIERS OF HIGH
QUALITY RESIN PRODUCTS

NEW

SMA AIRFIELD 1/48th AND SMALL SCALE PRODUCTION

SMA 1/48th AIRFIELD RANGE

SMAAR 030 LUFWAFFE PUSHING SET 2 £6.87

(2 figures pushing and 1 figure with rear tow bar)

SMAAR 031 AMERICAN 4 MAN AIRCREW £8.97

(1 x pilot, 1 x co-pilot, 1 x rear gunner, 1 x rear gunner/radio) (designed to compliment the Catalina kits)

SMALL SCALE PRODUCTIONS (1/72-1/76)

SSP006 GERMAN MUNITIONS AMMO TRAILER £5.87

SSP007 GERMAN IMBERT GENERATOR CONVERSION KIT £3.90

(To fit Airfix Opel blitz lorry)

AVAILABLE NOW IN STOCK!!

1/48 AIRFIELD RANGE

SMAAR026 GENERAL PAIL SET £3.21

(9 OFF / 3 TYPES PER SET)

SMAAR027 RAF DRIVER & MECHANIC SET £4.77

SMAAR028 RAF SEATED FIGHTER PILOTS C/W CHUTES £6.46

SMAAR029 PARACHUTE PACK SET £2.97

(4 OFF CHUTES / 2 OFF CHUTES + HELMETS)

FULL RANGE OF 1/48TH AIRFIELD & SMALL SCALE PRODUCTS IN STOCK

SEND FOR NEW AIRCRAFT LEAFLET...£1.00 P/P FREE
UK & EUROPE (OVERSEAS 0.30p)

TELEPHONE: 0181-292-5485 FAX: 0181-805-1751

THE COCKPIT

43 - 45 WEST STREET, 1st FLOOR,
SHEFFIELD, S1 4EQ.

TEL/FAX No. 01142 753145 (24hrs)

THIS MONTH'S SELECTION FROM OUR EVER INCREASING RANGE OF MODELS

HAYATE 'FRANK'	£8.99	J2M3 'RAIDEN'	£8.99
A6M3 "ZERO" 32	£8.99	SEA HARRIER FRS1	£10.99
ZERO TYPE 52 'ZEKE'	£8.99	JASDF F-15 EAGLE	£21.00
SPITFIRE Mk.1	£15.99	SPITFIRE Mk.Vb	£15.99
F-4F WILDCAT	£15.99	SPITFIRE Mk.Vb Trop	£15.99
KYOFU TYPE 2	£15.99	FW-190 A-3	£15.99
KAWANISHI 'SHIDEN'	£15.99	FW-190 F8	£15.99
P-51D MUSTANG	£15.99	FW-190 D-9	£15.99
P-51B MUSTANG	£15.99	MiG-15 bis	£15.99

KIT OF THE MONTH.....KIT OF THE MONTH.....KIT OF THE MONTH

★ F-15D MUSTANG 'KOREAN WAR'
★ £17.95 OR TWO FOR £35.00 PLUS P+P ★

DUE TO PHENOMENAL DEMAND - IPMS:

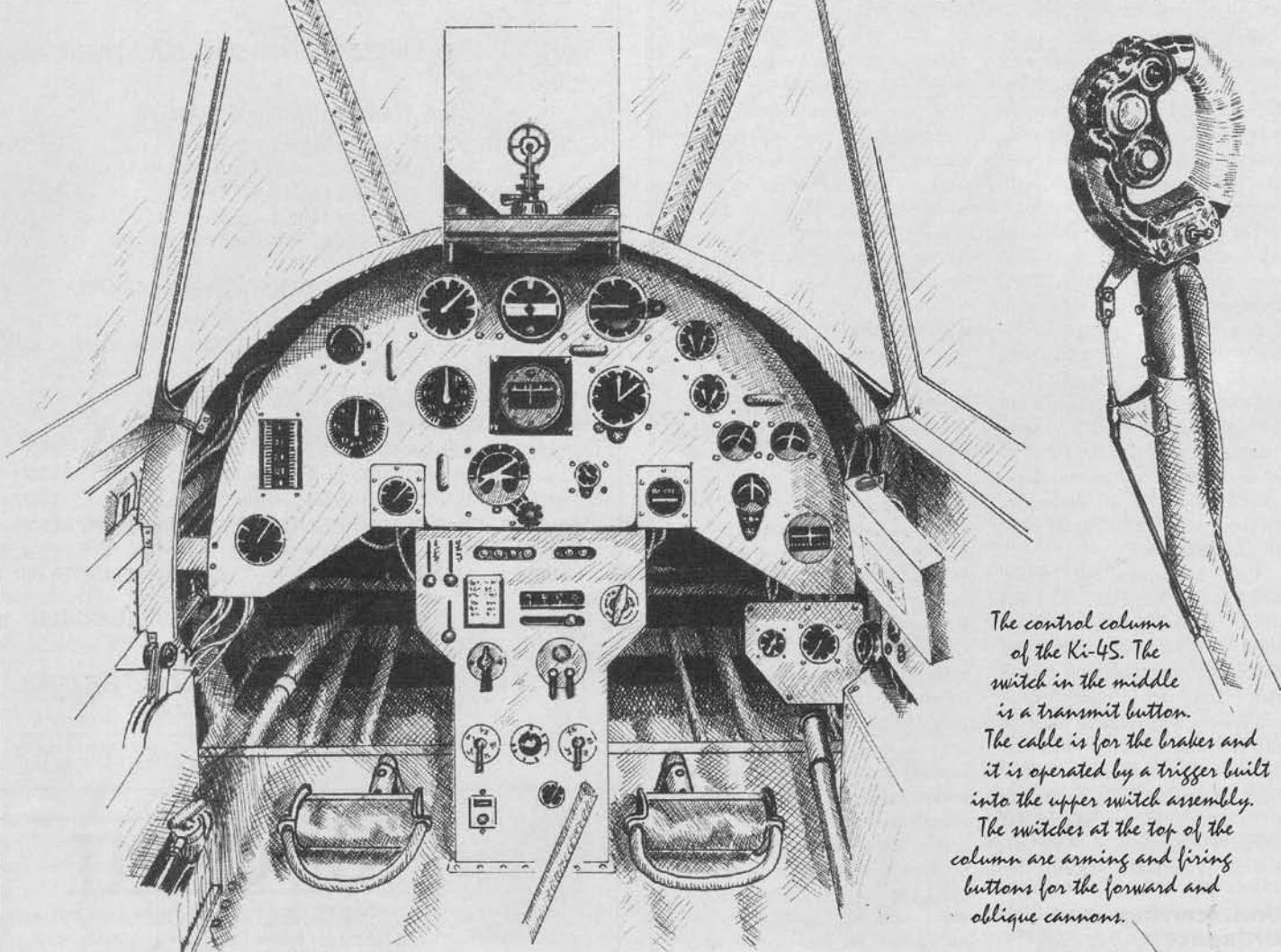
10% DISCOUNT FOR THE REST OF 1996

SEE OUR STAND AT THE NORTHERN EXPO 1/2 JUNE

WE HAVE A MASSIVE SELECTION OF S/H KITS AT PRICES
YOU'LL FIND HARD TO BEAT, GIVE US A CALL OR DROP US
A LINE WITH ALL YOUR REQUIREMENTS.

WE ALSO STOCK THE LATEST PUBLICATIONS FROM
AERLIFE/AEROSPACE/CZECH SIX/OSPREY/AIRCRAFT
MONOGRAPH/MBI/JAPCO & SQUADRON
SIGNAL/SMITHSONIAN

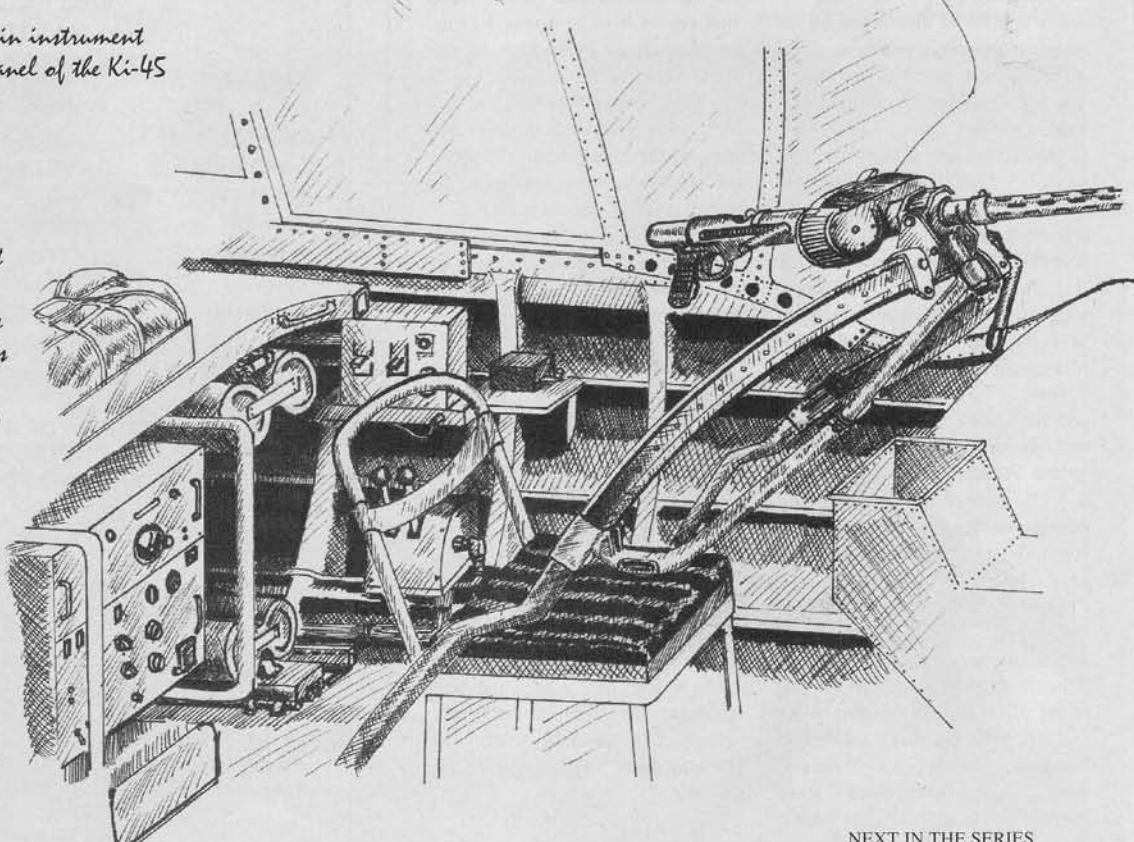
The Kawasaki Ki-45 Toryu (Nick)



The main instrument panel of the Ki-45

The control column of the Ki-45. The switch in the middle is a transmit button. The cable is for the brakes and it is operated by a trigger built into the upper switch assembly. The switches at the top of the column are arming and firing buttons for the forward and oblique cannons.

The radio operator/rear gunner's position. The seat on which he sits is a bit of a mystery as we have found no clear photographs of the base. It is obvious that he will have to be able to turn round and move forward but whether this is because the seat revolves or slides is uncertain. Any information on this area of the type will be greatly appreciated.



Aircraft Sketchpad

by
Steve Benstead



Continuing his very popular series, aviation artist Steve Benstead takes a look at a Dragon Slayer, the Kawasaki Ki-45 Toryu (Nick).

This is the view looking forward from the gunner's position. It shows the oblique firing cannons, their ammo feeds and ejector chutes.

The item in the foreground is a parachute pack and you can see its position in the previous sketch to give you an idea of everything's relative position.

Colour Notes

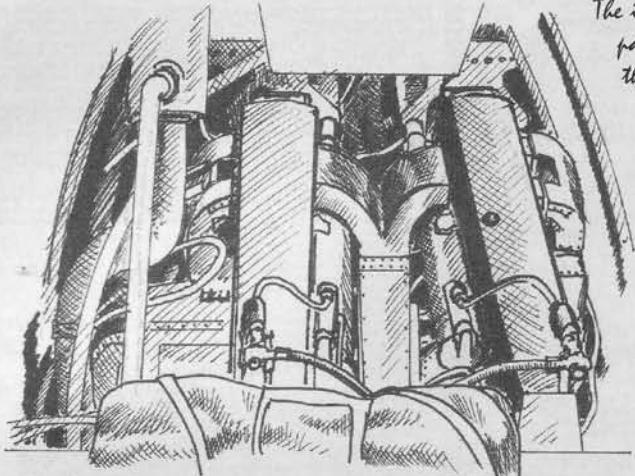
The whole question of interior colours in Japanese types can be a bit of a headache and the notes here are only given as a rough guide. If you really want to look into the subject I would suggest that you hunt down copies of the excellent 'Japanese Army Aircraft Colour & Marking In The Pacific War and before' by Ian.K.Baker.

The Ki-45 which is stored at the National Air & Space Museum's facility is still in its original colours. This shows that the interior of the Ki-45 was in various shades of green. The nearest FS reference to the most common colour is 34151 which is a Light Olive Green. Colours such as Light Grey Green (FS 34226) and Buff Green (FS 14255) have also been noted and these may well apply to this machine.

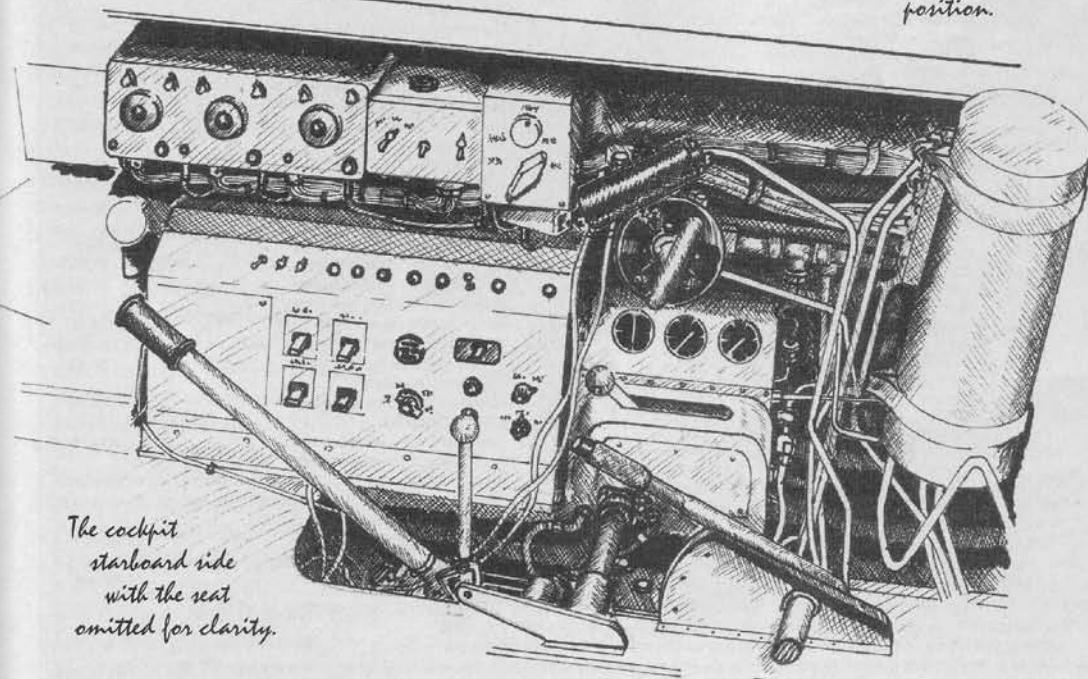
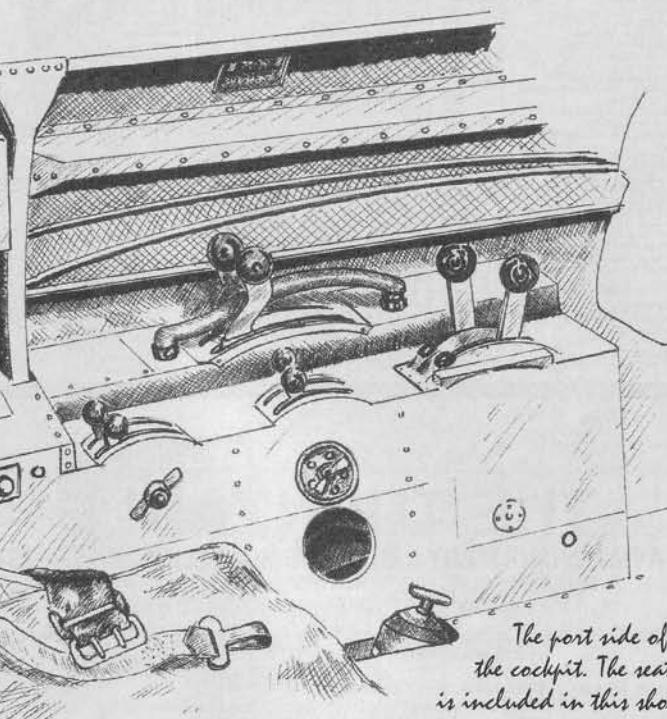
The instrument panel in the Ki-45 was black and the instruments have black dials with white numerals and pointers. The levers on the port sidewall are all black except for the rearmost pair which are red. The box above the levers on the port side is also black. The pilot's seat is the same green as the cockpit interior and the cushions are ochre, the seat harness is leather with metal studs and buckles. The main electrical boxes on the starboard side are a light green colour (probably FS 34226) and all the dial faces are black. The plates behind each switch are red at the top and black at the bottom. The handle of the large front lever is black rubber and the smaller one at the rear is wood. The 'T' handle above this lever is red and the circular plate on which it is mounted is black. The control column is the same colour as the interior, there is a leather boot at its base and the top section is black with a red, light blue and black (bottom to top) coloured switches in the grip. The portion of the grip to the starboard side is bound with material and is therefore a dark linen colour.

The rear area is the same colour as the front. The gunner's seat has a metal frame with a deep leather seat cushion. The radio equipment behind him is black and the ammo drums for the rear and ventral machine guns are gunmetal. The rearward firing machine gun is mounted on a bare metal rail and the support tubes running around each side of this rail are silver. The switchbox beside the morse key on the starboard side is black with those black and red labels behind each switch. The two levers below this are red and the cartridge collector chute below the machine gun is bare metal.

Apart from the translucent blue colour offered by Xtracolor, which is only applicable to Naval machines, there have been few paints specifically for the interior of Japanese types. One of the best colours available to replicate the odd colour often referred to as 'Bamboo' is Revell 86 Olive Brown and as far as the green goes I would mix up colours using Interior green (Humbrol 151) as a basis.



The port side of the cockpit. The seat is included in this shot to show its relative position.



The cockpit starboard side with the seat omitted for clarity.

Modelling Bookshelf

Swedish Aircraft Scale Plans

As a modeller with a bit of a thing for the Viggen, I for one was very pleased to find out about a range of softback books which deal with various types operated by the Swedish AF. The books contain numerous plans in both 1/72nd and 1/50th scale as well as a wealth of black and white and colour photographs.

The first edition has been out of print for a few years now, although the publishers inform me that they are thinking of reprinting it in the near future. The remaining series covers volumes 2 to 7 and each is between 125 and 150 pages thick. The first volume I had (in fact Volume 2) covers Fighters of the 1926 to 1984 period and these include:

Phönix 6; Nieuport 29C-1; Fokker CV-D; Heinkel HD 19; Aero Jaktfalken 24; Jaktfalken 28; Bulldog Mk IIA; Gladiator Mk I; Republic (Seversky) EPI; Vultee Vanguard 48C; Fiat CR 42; Regianne Re 2000; SAAB 21; SAAB 21 (J21RB); FFVS J22; SAAB 29; NA P-51B Mustang; NA P-51D Mustang; DH100 Mk 50 Vampire; DH112 Venom; DH100 Mk 1 Vampire; Hawker Hunter Mk 4; DH98 Mk 19 Mosquito; SAAB 32; SAAB 35; SAAB 37.

Volume 3 looks at Air-to-ground attack and Torpedo bomber aircraft from the 1926-1986 period. The types include

Fiat B.R. & B.R.1; Junker Ju 86K; Hawker Hart; Northrop 8A-1; Republic 2 PA; Caproni Ca 313; SAAB 105; SAAB T18B; SAAB 17A/B/C; SAAB 18A/B; Phönix 222; Heinkel HD 16; Heinkel He 115A-2;

Types such as the J21, J29 and J37 also appear in this title.

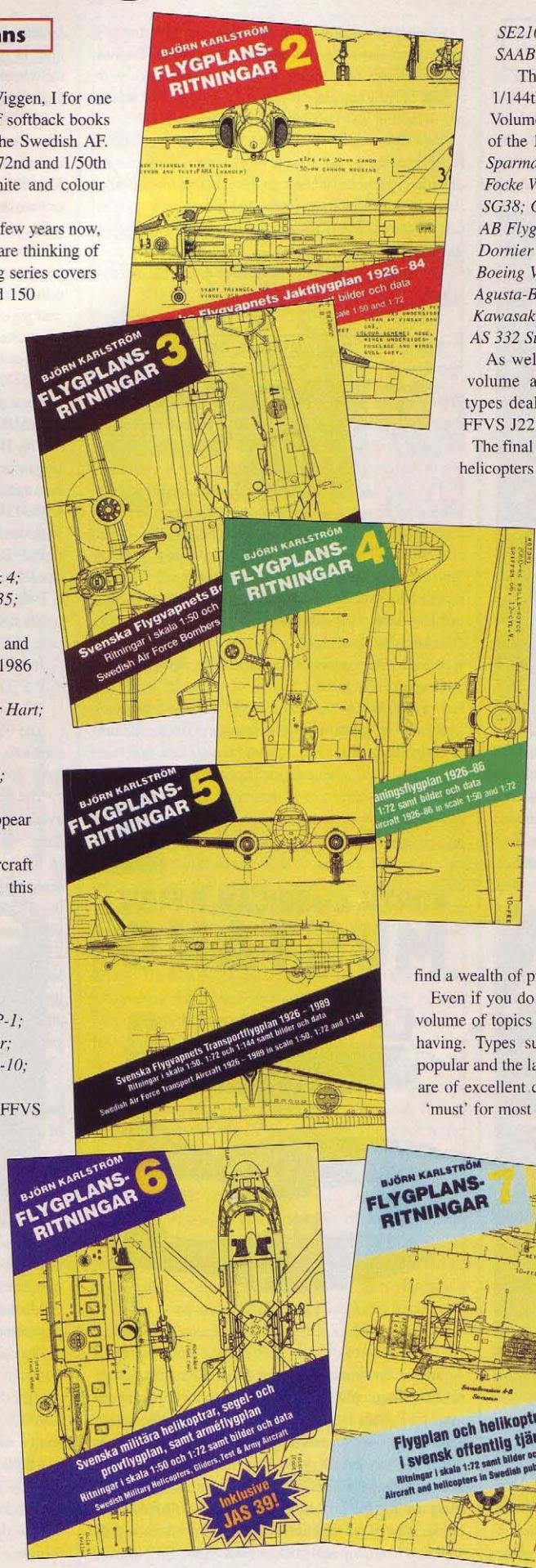
Volume 4 looks at Reconnaissance aircraft from 1926-1986 and the types included in this volume are;

Heinkel He 1, He 2, He 4, He 5/t & H.E 5/t T.B; SAAB 18 (L-11); FVM21/S 25; Fokker C V-E & D; Fieseler Fi 156; Hawker Hart & Osprey; Heinkel He 114B-1; Seversky-Republic EP-1; Heinkel He 114B-1; CASA 212-P2 Aviocar; Fieseler Fi 156; Caproni Ca 313; SAAB L-10; Supermarine Spitfire P.R. Mk 19.

There is also coverage of types such as the FFVS J22, NA P-51D, DH100 Vampire Mk 50, SAAB 29, 32C, 35 and 37 which have been covered, albeit in different variants, elsewhere.

The fifth edition looks at Transport aircraft from 1926 - 1989 and plans are offered in this title in 1/72nd, 1/50th and 1/144th scales. The types covered include;

Junkers F13 & W34; DH.90 Dragonfly; Beechcraft 18R; Junkers Ju 52/3m; Waco UKC; Dornier Do 24; Fairchild 24; Miles Falcon; Waco UKC; Junkers Ju 86Z7; Fokker F VIII; Caproni Ca 313; DH.104 Dove; EE Canberra; PB4-54 Catalina; DHC-4 Caribou; Cessna 404; Noorduyn Norseman; C-47 Dakota; SAAB 91A; Avro Lancaster Mk I; Grumman Goose; Vickers Varsity; Pembroke C Mk 52; Metro III; C-130 Hercules;



SE210 Caravelle; Sabreliner 60; SAAB 340B; Beech 200.

The larger types offered in this selection are in 1/144th scale.

Volume 6 looks at helicopters, test aircraft and gliders of the 1926-1991 period. The types covered are; Sparmann S1A; HP Hampden; JAS 39 Gripen; Focke Wulf Fw 58 'Weihe'; SAAB 210; MFI-9B; SG38; Grunau Baby; DFS Kranich; Weihe; AB Flygindustri Fi-3; Piper PA-18-150 Super Cub; Dornier Do 27A-4; MFI-10B Vipan; Boeing Vertol 44B; Alouette II; Hughes 269C; Agusta-Bell 204B; Boeing-Vertol 107-II; Kawasaki KV 107-II; Agusta-Bell 206; AS 332 Super Puma; MBB BO 105CB & CBS.

As well as having pictures of the selected types this volume also contains a selection of photographs of types dealt with in the previous volumes including the FFVS J22.

The final volume is number 7 and this looks at aircraft and helicopters in Swedish public service. Once again 1/72nd scale is used although the larger types are offered in 1/144th scale. The types covered in this volume include:

RWD 13; Waco ZQC-6; Fiat CR 42; Junkers W.33/W.34; Miles Martinet I; Fairey Firefly Mk 1; SAAB B 17A; Gloster Meteor 7; Lear Jet 24; Gloster Meteor TT Mk 20; Siebel Si 204D; Gates Learjet 36A; CASA C.212-CE Aviocar; Douglas AD-4W Skyraider; Cessna 402C; Mitsubishi MU-2; Piper PA-31 Navajo; Grumman G.159 Gulfstream; Bell 47; Cessna F337G Super Skymaster; Bell 206 Jet Ranger.

One of the most useful things about this volume is that the Meteor TT Mk 20 plans include a nice 1/72nd scale three view including the towed target winch unit, very useful!

This title deals with the types operated for target towing operations and I was amazed to find a wealth of pictures for the types, all of which are in colour.

Even if you do not have an interest in Swedish types the sheer volume of topics covered in these books makes them well worth having. Types such as the Hampden are always going to be popular and the large amount of photographs in each, all of which are of excellent clarity and quality, make the entire series a real 'must' for most aviation enthusiasts.

At present I do not think that the titles are brought into the UK and therefore if you want copies or you just want to know more about the series contact the publishers directly. Their address is;

Allt om Hobby,
Box 90 133,
120 21 Stockholm,
Sweden.

My thanks to Allt om Hobby for the review samples and they are highly recommended to all.

Latest Aircraft Monograph from AJ Press

The Czech firm of AJ Press have produced a wealth of monograph titles on various aircraft types. Initially the titles have Czech text but after a while they are translated and reprinted in English. The latest title to



undergo such a transformation is on the Focke Wulf Fw 190. Entitled 'Fw 190 A/F/G/S Part 1' the title is in a 48 page, A4 format with a colour laminated cover. The inside front cover has full colour side views of five machines including an A-2 of II/JG 26, an A-7/R2 of 2/JG 11 and an A-8/R8 of 5/JG 300. The title's text gives a narrative over-view of the development and operational use of the BMW powered Fw 190 and there are numerous black and white photographs to support the text. Each variant and all its different sub-variants and modifications are dealt with and the title will leave you with little trouble in identifying a U8 modification etc. The two-seat S-5 and S-8 are covered and there are some nice interior shots of both cockpit stations. The centre pages are a colour insert and the first contains colour side views of five machines. The centre pages are a full five view set of colour artwork depicting an A-6 of Stab/JG 51 which was flown by Uffz. Helmut Johne in Poland in the autumn-winter 1944 period. Another five colour side views of types, including an S-8 are on the other page of this colour insert. The last 14 pages of this title are full of 1/72nd scale plans of just about every variant of the Fw 190A/F/G/S series. Starting with the V1 in both its initial and moded states the plans cover all the usual types and include 'specials' such as the torpedo carrying A-5/U14 and Bv 246 armed A-5/U15. Both two-seat versions are included along with a 'Doppelreiter' equipped A-7.

The final two pages of the title deal with the camouflage and markings of the Fw 190 and these include tables with all the Reich defence tail band combinations, RLM colour and a full colour four-view set of illustrations which show the position and style of all the stencilling applied to the Fw 190. As usual with a title of this sort the back cover has a full colour rendition of the interior of the Fw 190A-1.

Overall this is another superb title and one that is a real 'must' for all Luftwaffe modellers. The English edition of this title makes it just so much more with regard to information etc but to be truthful the title is worth having just for those excellent scale plans.

This title is just £7.95 plus P&P and it is highly recommended to all. If you want a copy they can be obtained in specialist book shops or direct from Books International. If you are interested in this, or any other title in the AJ Press range, then give them a ring on 01252 376 564

My thanks to Books International for the review sample.

New 'In Detail' Title from ACE

Following on from the last release by Ace publishing (See vol 2 Iss 5 Page 314), we have recently received the latest in their 'In Detail' series and it deals with the North American P-51 Mustang from B to K variant.

The title is in the usual format of a full colour laminated cover A4 format book of thirty-six pages (excluding the cover). The exterior of the cover contains full colour art work depicting various machines. The front cover has views of:

- Mustang Mk III, FZ196 of No.306 (Polish) Sqn, June 1944. This machine was flown by Polish ace Wladyslaw Potocki.
- P-51D 'Mary Mac' of the 325th FG, flown by Ltn. Gordon.H.McDaniel
- F-51D-30-NA of the 67th Fighter Bomber Squadron, 18th Fighter Bomber Group, Korea, early 1951.

factory drawings of the revised upper decking of the B and D and these are followed by details of the tailwheel assembly and the radio equipment fit. Opposite this is a good cockpit layout diagram for the P-51D. After a selection of war time photos and some text there are two pages of photographs and they include shots of the V-1650-3 engine and the Packard V-1650-7. The ammo bays and machine gun ports are covered in some depth, photographically, on the other page.

The centre pages are a colour insert and the first page gives some nice art work of the P-51B cockpit, pilot's seat, N-9 and N-3B gunsights and a view of the cockpit canopy in the open position. The centre pages are another selection of colour side view art work and these include:

- P-51K-5-NT 'Nooky Booky IV' flown by Capt. Leonard 'Kit' Carson of the 357th FG.
- P-51B-10-NA 'The Hun Hunter Texas' flown by Ltn. Henry Brown of the 355th FG.
- Mustang Mk III, PK*A of no. 315 (Polish) Sqn, August 1944.
- P-51D 'Miss Miami' of the 77th FS, 20th FG and flown by Ltn. Reps Jones.
- P-51B-5-NA 'Bee' flown by Capt. Duane Beeson of the 334th FS, 4th FG in April 1944.
- P-51D 'Flying Undertaker' flown by Maj. William Shomo.
- P-51D-10-NA 'Petrie 2nd' flown by Lt. Col. John.C.Meyer the CO of the 487th FS, 352nd FG.
- P-51D-15-NA 'Jersey Jerk' of the 361st FS, 356th FG flown by Maj. Donald Strait.

The outer pages of this centre insert have three plan views to illustrate the camouflage pattern applied to RAF operated Mustangs.

The rear portion of the title obviously looks at all available kits, accessories and decals for the P-51 and these are followed with more detail photographs, albeit in black and white this time. Another set of 1/72nd scale plans fills the next three pages and these include the P-51, TP-51D, P-51D-NT and P-51D-NA. Top views are also included and there are scale views of the 75 gallon and 108 gallon drop tanks, M-10 rocket launchers and 454kg and 227kg bombs. The next two pages are full of black and white diagrams from the aircraft manual and these include seat, cockpit canopy, gunsight, propeller, engine bearer and undercarriage oleo details, mainly in exploded view format.

The last section of the book is all text and the inside back cover is another selection of colour photographs of a preserved example. The back cover offers another selection of colour side views and these include;

- P-51C of the 311th FG based at Chengtu airfield, China in the summer of 1945.
- Mustang Mk III of No 112 Sqn based at Tantarella airfield, Italy in 1944.
- P-51D of the 116 Tajeset, Israel Air force during operation Kadesh in 1956.
- Mustang Mk IVA, KH865 of no. 303 (Polish) Sqn, summer 1945.

Overall this is another excellent title from Ace Publications and one that I can recommend to all. If you think you have all you need on the Mustang this title will still be able to offer that little extra and if you want a simple one-point reference book, then this is it.

I think that this title should retail for about £4.99 in the UK and the Ace range is available from Books International and The Turntable Hobby shop.

My thanks to Ace Publications for the review sample.



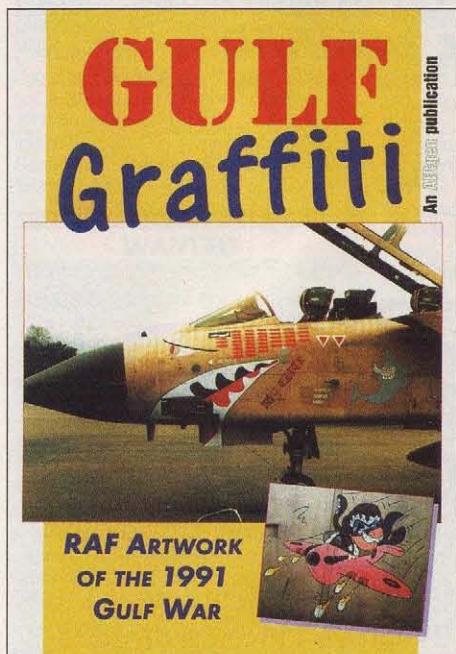
Inside the front cover you will find a selection of detail colour photographs of currently preserved machines. This is also the same layout on the inside back cover. As the text is in Polish it will not be of much use to you however on the fourth and fifth page you will find the first set of 1/72nd scale plans and these are for the P-51B, C and RAF B with Malcolm Hood. The plans include side views of each type as well as a front, top and bottom view of the B/C with an inset for the Malcolm Hood. There are some nice

AIRgen Specials

Having had a look at Quarter Scale Modeller (QSM) in the News update pages a while ago (See Vol 2 Iss 4 Page 197) I am pleased to say that we have recently been passed copies of two specials they produce.

The first is entitled 'Gulf Graffiti' and as you will guess the title deals with all the various nose art etc carried by RAF machines during the Gulf War. The title has been edited by Andy Evans and consists of 60 pages, plus cover. The cover and the centre spread are colour and the rest of the title is in black and white. Each page of the title is filled with photographic coverage of the numerous examples of the artistic qualities of your average RAF ground crewman and this title will leave you with little doubt about how certain machines looked. The inclusion of illustrations of how an aircraft looked at various times in its career is a nice touch.

The title deals with each aircraft type in turn, so you begin with the Tornado which covers 26 pages and then you move on to the Tri-Star (2 pages). This is followed by the centre spread colour insert and then we move back to helicopters (one page colour), TIALD (4 pages), 'Scud Hunters' (3 pages), Jaguar GR.1 (10 pages), Buccaneer S.2 (6 pages), Victor K.2 (4 pages) and the title finishes off with a look at the very limited application of artwork to the Hercules, Nimrod and VC-10.



Overall this is a superb publication and one that no self respecting modeller with a liking for modern types should be without. The photographs speak volumes for the specific aircraft types and the text is informative, so with this book you should have little excuse for getting your model wrong!

The second title was in fact the first product from AIRgen publications and it was available at their launch during the IPMS Nationals last year. The title is still available however so here is what it is all about.

The title is a 60th anniversary special to celebrate the Hawker Hurricane. The 34 page title is in A4 format with spot colour on the cover only. The entire content is dedicated to the Hurricane and how to model it. As the title is only interested in 1/48th scale

60th Anniversary Hurricane Special

Quarter Scale Modeller

The Magazine for 1/48 scale Aircraft Modellers November 1995



Tuck's Hurricane

Hurricanes at Sea

Hurricane VC

Hurri-bomber

Phoney War Fighter

Hard-hitting Hurricanes

Pattle's last combat

Kit reviews

products the kit reviews on the inside front cover deal with all the currently (November 1995) available kits of the Hurricane in this scale. The first article in the title deals with the aircraft of Bob Stanford Tuck and how to model it. There are some very useful scrap drawings of internal details and good shots of a completed model. Good narrative text deals with all the areas of the machine including colour and markings and a good bibliography is included for all of you who want yet more information.

The use of the Hurricane at sea is dealt with in the second article and how to model them from either the Airfix or Hobbycraft kits. Nice detailed drawings of the position and shape of the catapult spools are of great use and the catapult cradle would make a most impressive scratchbuild project for any modeller. The Sea Hurricane Mk Ib, Mk Ic, 'Operation Torch' Mk XII and a rocket firing Mk IIc are all dealt with in this article. Each is modelled and good photographs of the completed model are included. The addition of the 40mm cannon or rockets to the Hurricane made it a hard-hitting ground attack machine and the third article in this special looks at these particular marks of the Hurricane. The Vickers 'S' gun and its fitment to the Mk IIc plus the addition of this and rocket projectiles on the Mk IV are covered. There are some useful detail scrap views of the armoured radiator fitted to the Mk IV as well as the 'Knuckled' tail wheel and Vickers 'S' gun gondola.

Early ('Phoney') War operation of the Hurricane Mk I is covered in the next section with the now out of production Mk I conversion by Blueprint being used as the basis to produce a replica of Paul Richey's machine, 'dear old George' from the Airfix kit.

The last major article in the title is about the 'Hurri-Bomber' and a Dieppe Raid Mk IIb of 174 Sqn and a night intruder of No 87 Sqn are made up with detail of the bomb racks supplied as scrap drawings. The final section of the title is set aside to modelling two machines of very famous hurricane pilots. The first is P3576 a Mk I which was flown by Flt. Lt. James B. Nicholson on his VC winning sortie on the 16th August 1940. Nicholson was the only fighter pilot recipient of the VC and it is fitting to have included his machine in a title all about the Hurricane. The other machine in this last section is that of the top-scoring

pilot of the RAF, namely Marmaduke Thomas St John 'Pat' Pattle. The machine in which Pattle died, a Mk II, serial AS988, is modelled from the Airfix kit and although the author notes that there is no evidence to prove Pattle's machine ever carried the markings in which it is modelled, it is fitting that the last few pages of this special should be shared by a VC winner and the top scorer of WWII, both of whom flew the Hawker Hurricane.

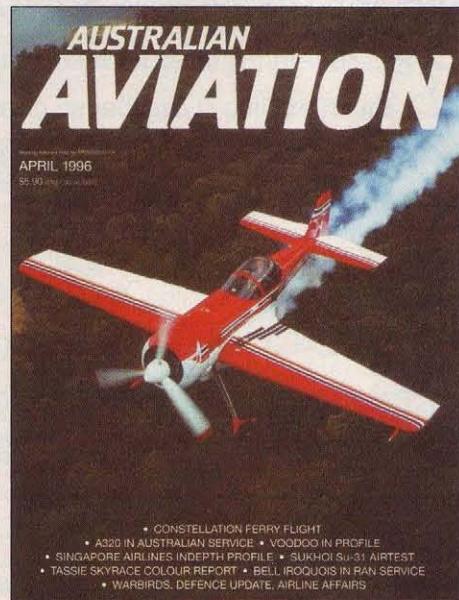
Overall I think that any Hurricane fan will love this title and the fact that it only deals with 1/48th scale kits does not mean that modellers will not find it of use to make up similar kits in 1/72 or other scales. It is certainly a title which I can see should sell well and if you like the type then I am sure you will enjoy reading this special.

My thanks to AIRgen Publications for sending me samples of these two titles. If you want a copy then drop them a line at:

AIRgen Publications, 191 Upper Allen Street, Sheffield. S3 7GW.

Monthly Title on Australian Aviation

Although this is not truly a book, this monthly title is very specialised and it may appeal to many of our readers. Entitled 'Australian Aviation' the magazine is monthly and it is in a 90 page, full-colour, A4 format. The contents are, as you will have guessed, all about Australian types and operations. The edition we had was April 1996 and this dealt with flying the Constellation, A320 in Australian service and a profile on the Voodoo. The title also looks at Singapore airlines, does a test of the Sukhoi Su-31 and looks at the Bell Iroquois in Royal Australian Navy (RAN) service. Like all modern aviation magazines the title is also full of news and views pages looking at warbirds, defence and airliner operations etc.



This is certainly an interesting title and one I am sure some readers will be interested in. If you want a subscription then they are available at \$99 from the publishers at:

Aerospace Publications Pty Ltd, PO Box 3105, Weston Creek 2611, Australia.
Tel 61 6 288 1677 Fax 61 6 288 2021

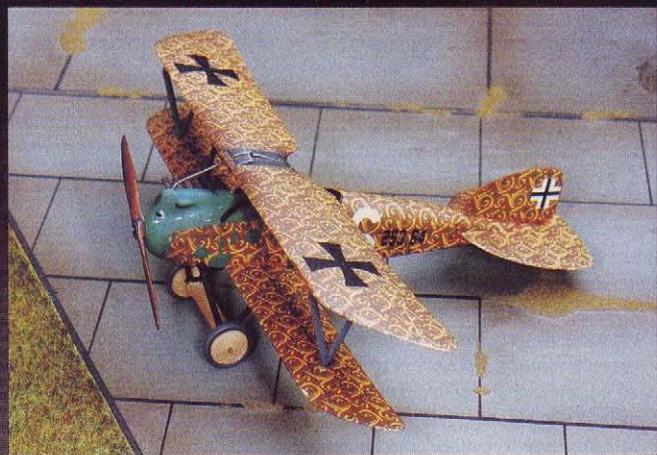
STOP PRESS - PEGASUS - NO.1 BEST QUALITY LIMITED RUN KITS - SAM READERS SURVEY JAN 1996



Messerschmitt 109H £10.99



Albatros D.Va £9.99



Albatros D.III (Oef) £10.99

CURRENT RANGE IN STOCK FOR IMMEDIATE DELIVERY

All kits are 1:72nd scale, Short-Run Injection Moulded Polystyrene, with Lead Free Metal Detail Parts, a complete Decal sheet, and where appropriate Extruded Strut Material.

Curtiss Sparrowhawk £4.50 Roland D-II £9.99

Curtiss JN4-D Jenny £6.50 Phonix D-I £9.99

Lockheed Have Blue £8.99 Reggiane Re 2005 £10.99

Albatros D.Va £9.99 L.V.G. C.VI £11.99

Rumpler C.IV £11.99 Lockheed XFV-1 £11.99

Messerschmitt 109H £10.99 N.A. FJ-1 Fury £11.99

BLUE MAX 1/48th.

Nieuport 11 bebe £19.99

SPAD VII C.I £19.99

Pfalz D-IIIa £19.99

Nieuport N.28 £19.99



Please note that all other kits not listed here are **SOLD OUT**

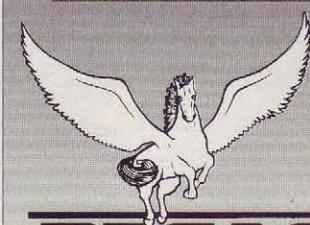
Payment can be made in **Sterling** by any of the following methods: Access/Mastercard, VISA/Barclaycard, Eurocard, Switch, Delta, IMO, P.O. Cheque - payable to C.J.B. Gannon.

Next Release: Curtiss P-40Q - £11.99. Blue Max Pfalz DXII - £19.99 NEW: 4-Colour Lozenge & Naval Lozenge Decals £4.99ea French, Belgian, & Italian WW1 Nat. Markings sheets £3.50ea

FREE POSTAGE ON ALL ORDERS - WORLDWIDE

Dept. SM P.O. Box 50 Whitstable Kent CT5 2UX GREAT BRITAIN

Tel: (01227) 277569 - 24Hr. Order Line. Fax: (01227) 770195



PEGASUS

Subscriptions

Subscribe to the **NEW** Scale Aviation Modeller NOW!

Please start my subscription from the next available issue.
 I am an existing subscriber so please extend my current subscription.

Mr/Mrs/Ms Initials..... Surname.....

Address

Postcode..... Daytime tel. no.....

Cheque, Credit/Debit Card for 12 Issues

UK £21 European Air £40 European Surface £30
 World Air £45 World Surface £35

I enclose a Sterling cheque made payable to DMZee Marketing Ltd

Please charge my Visa Access/Mastercard

Card no. Expiry date

Signed. Today's date

SUBSCRIPTION TELEPHONE HOTLINE (44) 0 1234 216016



SAM Publications
24 Grove Place, Bedford
United Kingdom MK40 3JJ



BACK ISSUES

We still have stocks of Vol 1 issues 5, 9, 10 and Vol 2 issues 1, 2, 3, 4
Available at £2.20 inc p&p (UK), £3.50 Overseas from address above.

Readers Classified Advertisements

For Sale

• **ACES HIGH** by Christopher Shores and Clive Williams. First edition 1966, very good condition. Offers to Mr P.Carr on 01908 617206.

• **COLOUR PRINT COPY**, limited edition; 'The Drop', depicts Pups - Albatross, 1917, £18.00 each P&P paid. Contact L.W.Stonell, 29, The Ridgeway, Gidea Park, Romford, Essex RM2 5BT.

• **SCALE AIRCRAFT** Modelling Vol 1 Iss 1 to date. First five volumes in binders. Mint condition. Reasonable offers please (will not separate). contact Chris Ulyatt, 31, Hibbert Crescent, Sutton-in-Ashfield, Notts NG17 4LB. Tel 01623 440854.

• **SURPLUS SCALE** model aircraft - mainly 1/144th scale vac-forms for experienced modellers. Also some boxed injection moulded 1/72nd and 1/144th kits. All at 50% RRP including postage. Please send SSAE for list to Mr M.J.Murray, 26, Railway Street, Gillingham, Kent, ME7 1YF.

• **MONOGRAM 1/48TH** scale B-29 (£20), B-58 (£25), Me 262 (£7) and B-24J (£15). Each is complete, unrestated and boxed. Contact Mark on 01952 882576 (evenings only).

• **AIRCRAFT ILLUSTRATED** Magazines, from Vol 1 No 1, total of 326 magazines. For sale or swap for 1/48th scale WWII aircraft models. Contact K.Webb, 8 Green Lane, Avonmouth, Bristol, BS11 9JD.

• **REVELL 1/32ND** Tornado GR1, Matchbox 1/32nd Venom NF3 and Matchbox 1/32nd Tiger Moth. £10.00 each kit. Contact G.R.Knowles, 27, Elms Road, Worksop, Notts. S80 1QD.

• **SIX PEWTER** military figures 4" high, boxed. £16.00 each or £90.00 the lot. C.scope 770D Metal detector in V.G.C c/w head cover and batteries; £65.00. Contact P.Robinson 2, North End Cottages, Roos, Hull, East Yorkshire. HU12 0JA.

WANTED

• **I AM LOOKING** for RCAF (Maple Leaf) 1/72nd scale decals. Has anyone unused bits of Superscale decals 72-425, 72-472, 72-507 or 48-264 they don't want. Contact Mr R.Helps, 25 Hillsborough Park, Camberley, Surrey. GU15 1HG. Tel 01276 27435.

• **STINSON 'RELIANT'** kit by ERTL in 1/48th scale. Contact Gordon Gomersall on 0113 264 5253 with details of price plus postage.

• **MONOGRAM Close-Ups** and German Painting Guide. Best price paid for good condition copies. Contact the Editor via 01234 216016 with details.

• **UNMADE KIT** of Hasegawa HADT 108, OV-10D Bronco long nose. Contact M.Mathias, 6, Craig Park Rd, Malpas, Newport, Gwent. NP9 6HB.

• **KITS, BOOKS**, magazines, photographs, plans etc on German & American experimental & prototype aircraft from 1935 to 1945. Write with details and prices to Ben Panting, 38 Molyneux St, London. W1 5HY.

• **UNMADE WESTERN** Models Ltd, or any other manufacturers, Cessna 150 or 152 light aircraft. Must be complete and in 1/72nd scale. Please contact Mike on 0161 748 1059 after 6.30 pm (Manchester).

• **TO BUY OR BORROW**, Aeroguides No 2; Jaguar, No 4 & 21; Tornado and No 5; Buccaneer. Plus, to buy, unmade Premiere models 1/48th kit No P3102 Red Arrows Hawk. Good prices paid. Contact A. Valentine, 3, Peris, Acrefair, Wrexham. LL14 3LE.

• **SCALE AIRCRAFT** Modelling magazine. Full set preferably, subject to price. Any offers to A.Davies, 3 Rose Leigh Cottages, Downham Wk, Manchester. M23 9DG.

• **SCALE AVIATION** Modeller Vol 1 Iss 1 & 7. Also early issues of Fine Scale Modeler, Windsock and Military Aircraft Preview magazines urgently needed. Good price paid, call Dennis on 0151 929 3510.

• **POSTCARDS, PHOTOS** etc of Vickers Viscounts, 1948 - 1975. Colour preferred, any livery. Also die casts of same. Contact Wally Joslin, 3613 Bob-O-Link, Irving, TX 75062, USA.

Forthcoming Events

Scale Aviation Modeller will advertise forthcoming events in this column free of charge for event organisers who wish to give advance notice of their shows. Write to the editorial address on page 195. We will continue to run your notice until the event is held, space permitting.

• **THE POOLE VIKING** Model Club will hold its Annual Model Show on Saturday, May 18th 1996, at St Mary's Church Hall, Wimbourne Road, Poole, Dorset. The event will begin at 10am. It has become one of the major model shows in the south of England, with participants from all over England and from overseas as well. For further details, please contact the Club Secretary, John Bothamley at 9, Heather Close, Bournemouth, Dorset; Tel 01202 527723.

• **VISIT MIDLAND EXPO 96**, Britain's largest one day scale modelling show. The event takes place at Leasowes Leisure Centre, Kent Road, Quinton, Nr Birmingham on the 19th May 1996. There will be club and Society displays, extensive model competitions and general and specialist traders. A Tombola will be organised, free car parking and excellent catering and refreshments are available. This will be one model show not to be missed. For more details contact; Dave Child, 89 Charnwood Road, Great Barr, Birmingham. B42 1JS.

• **THE NORTHERN MODEL** Show, the North's largest scale model show will be held at the Temple Park Centre, South Shields on the weekend of the 1st & 2nd June 1996 from 10am to 5pm daily. With displays by IPMS branches and model clubs there will be over 1,000 models on display. There is a large open competition, modelling demonstrations and 25 traders. The venue has a cafe and bar plus acres of free parking. For more details contact; Rob Sullivan, 6 Riversdale Close, Blackhall, Tyne & Wear. NE17 7LW Tel 01207 561971.

• **"IT'S A SMALL WORLD 96"**, organised by the Lordwood Model Club and Revell (GB) will be held at the Queen's Hall, Rochester Corn Exchange, High Street, Rochester, Kent on the 29th and 30th June 1996. The show will feature a large exhibition and trading area as well as a competition. For further details, contact Mr Dominique Jadoul, 12 Charter Street, Chatham, Kent ME4 5RJ (Tel: 01634 841504 after 6pm).

• **IPMS AVON** are pleased to announce their seventh annual model show and competition will be held on Saturday 3rd August 1996 at the Bath Pavilion, North Parade, Bath. Open from 9.30am to 5.00pm there will be thirty clubs and a similar number of traders as well as competitions, Tombola, raffle and the usual high standard of catering to ensure a good day for all. In addition the beautiful city of Bath is just a short walk away. A multi-storey car park is adjacent to the venue. For details contact Steve Larkin, 173 North Road, St Andrews, Bristol BS6 5AH Tel 0117 9245850.

• **THE LYDD CLASSIC** Airliner Fly In and Classic Car Drive In will be held on the 30th June 1996 at Lydd Airport, Kent. For more details please ring 01737 822200.

• **THE AERO SPACE & Vehicle Club** is holding its annual Model Show and competition at the Community Centre, Church Road, Wombourne, Wolverhampton on the 8th September 1996. The event is open from 10.30am to 4.30pm. For more information, please contact Mr John Van Leerzen 163, Bells Lane, Stourbridge, West Midlands Tel 01384 278600 or Mr Norman Robinson, 10, Otterburn Close, Heath Hayes, Cannock, Staffs. WS12 5TW tel 01543 276025. Please enclose a SAE with all enquiries.

• **SUTTON COLDFIELD** Model Makers' Society present their annual Model Expo on a new date and at a new venue, so make a note! The event will be staged in the Sutton Coldfield Town Hall on Sunday 15th September 1996. The society is celebrating its twentieth year so why not come along and help us in the festivities. If you have any questions please contact; Mr R.Day (Hon Sec) "Ashgrove", Diddley Lane, Fillongley, Coventry. CV7 8DQ.

• **WALLINGFORD IPMS** Second Model show at the Regal centre, Wallingford, on Sunday 22nd September 1996 10.30 till 4.30. Admission £2.00 for adults and £1.50 for children and O.A.P.s. All proceeds to the Handicapped Childrens Toy Library. For further information contact George Clark, 7, Station Road, Wallingford, Oxon or phone 01491 837124 (daytime only).

• **SUNDERLAND SCALE** Model Club annual show is to be held at Fulwell C.A Centre, Chapman Street, Fulwell, Sunderland, Tyne-Wear on Sunday 29th September 1996 from 10.00am to 4.00pm. Open competition, trade stands, bring & buy etc, plus refreshments and RNLI stand. Enquires to Dennis Walton, 45 Ferryboat Lane, Sunderland, Tyne-Wear. SR5 3RD Tel 0191 5480744.

• **MILDENHALL PLASTIC** Model Club annual model show will be held at the Bob Hope Recreation Centre, RAF Mildenhall on Sunday 6th October 1996. Entrance is free, club and trade stands plus refreshments. For more details contact Jeff Hickford on 01223 503551.

• **THE IPMS NATIONALS** will be held at Donington Exhibition Centre on the weekend of the 30th November/1st December 1996. The change of date is due to difficulties in the availability of the venue.

• **SPECIAL EVENT** to celebrate the 20th anniversary of the Sutton coldfield Model Makers' Society. It will be held at the Sutton Coldfield Library staring at 7.30 pm and admission will be 50p. 26th June - John Adams of Aeroclub talks about aircraft and other subjects close to his heart.

Clubs & Societies

• **TAYSIDE MODELLING** Society. Meet Friday evenings monthly. Oakbank Community Centre, Perth 1930 to 2200pm. Details from Keith Herd, 38 Ashgrove, Perth. Tel 01738 629555 (Sorry no under 16's).

• **LORDSWOOD (JUNIOR)** Model Club is meeting every Saturday between 4.15 and 6.15pm at the Lordswood Public Library, Kestrel Road, Lordswood, Chatham, Kent. ME5 8TH. The club supplies basic modelling materials and equipment and is sponsored by REVELL (GB), so why not go along and have a look. For more details contact Mr D. Jadoul on 01634 841504.

• **YORK PLASTIC** Model Society meets the third Friday of each month at Osbalwick Social Club. Contact Chris on 01430 873408 or Jim on 01904 411515 for information.

• **MODELEXE** - East Devon Model Club now meets the last Wednesday of each month at 7.30pm at the St Davids Community Centre, Exeter. All are welcome whatever the standard. Contact Mr K.Sweeting 10, Old Barn Close, Stokecanon, Exeter, Devon. EX5 4AD.

• **THE CLACTON-ON-SEA** Branch of the IPMS meets on the second Monday of each month at the Brotherhood Hall, St Oyath Road, Clacton from 7.30pm onwards. For further information contact Peter Terry 42, Valley Road, Clacton-on-Sea, Essex or Tel 01255 428653.

• **"FAMAS"** (pronounced "Famous") bi-monthly journal of the Frog & Airfix Model Aircraft Society. For further details please write to; FAMAS, 35 Rosebery Road, Suffield Park, Cromer, Norfolk. NR27 0BX.

• **THE CHILTERN** Scale Model Club (incorporating Chiltern IPMS) meets on the first Wednesday of each month from 8pm to late at the Shefford Memorial Hall, Shefford, Bedford. Why not come along, everyone is welcome. For more information contact the club secretary, Dave Burlison at 26 Leaves Spring, Stevenage, Herts. SG2 9BR.

• **NORTH STAFFS** Model Club meets every Thursday 7pm - 10pm at the Seabridge School, Roe Lane, Newcastle-under-Lyme. Contact Stefan on 01782 618181 or Phil on 01782 544612 for more details.

• **NORTH ESSEX** Modellers, a new club for all modellers meeting at the Civil Service Club, Flagstaff Road, Colchester on the 2nd Monday of each month. Ring Jerry Baker on 01206 855080 or Mark Harris on 01206 842694 for further details. All ages and interests welcome.

• **CHELSFORD MODEL** Club meets the first Monday of each month at The Cricketers Public House, Moulsham Street, Chelsford from 7.30pm. We hold a monthly competition so why not drop by. For more information contact Stuart Shakespeare on 01245 609098 or Maurice Meider on 01245 250617.

• **ROBERTSBRIDGE** Aviation Society Model Club meets every Wednesday at 8.00pm at Bush Barn located on A21 going north from Robertsbridge. All are welcome whatever the standard. For more information please contact David Morrice, 8, Belvedere Gardens, Crowborough, East Sussex TN6 2LR or Tel 01892 654507.

• **BRADFORD IPMS** meets at The Mailcoach Inn, Huddersfield Rd, Odsal, Bradford on the 4th Thursday of the month from 7.30pm. All are welcome. For further details contact Martin Fisher on 01274 676127.

• **THE CELIAN** Model Aircraft Museum. A collection of over 500 1/72nd scale model aircraft, each of a different type or mark to have served with the RAF and FAA since about 1920. The display seeks to demonstrate the history of these two services via their aircraft. Also several large size dioramas depicting important WWII battles. Open Wednesdays from the 3rd July to 25th September inclusive. Alternative viewing by appointment. Telephone 01570 422 604. The museum is at Brooklands, Cellan, Lampeter, Cardiganshire 2.5 miles from Lampeter on the B4343 and 300 yards north of the Cellan War Memorial.

Send your classifieds (no more than 30 words please) to:

Readers Classifieds
Scale Aviation Modeller
PO Box 527
Bedford. MK40 3JJ

AVIA IMPORTS

195 Sidegate Lane, Ipswich, Suffolk IP4 4JN
Telephone/Facsimile: (01473) 720993



ISRAELI F-4E(S)
Use Paragon 7239 or 4889
and cutting edge decal 72004 or 48004

AEROMASTER DECALS 1/72d	
AMSP7201 Luftwaffe Top Guns	£8.50
AMSP7204 JG54 Green Hearts	£11.25
AMSP7204 Eagles of the Rising Sun	£14.49
AM72001 FW-190A Butcher Birds Pt.1	£4.25
AM72002 Blf-109G/K Reich Defense Pt.1	£4.25
AM72003 BOB Spitfire, Hurricane, 109	£4.25
AM72004 Pacific P-51D/K Mustangs	£4.25
AM72005 USN & USMC Wildcats	£4.25
AM72006 P-51D 8th AF	£4.25
AM72007 P-47/D/M Thunderbolts 56th FG	£4.25
AM72008 Pacific P-47D Razorbacks	£4.25
AM72009 US Aircraft in FAA service	£4.25
AM72010 Luftwaffe code numbers	£7.75
AM72011 US ID numbers	£5.95
AM72012 US ID numbers & letters, black	£5.95
AM72013 US ID numbers and letters, white	£5.95
AM72014 US ID numbers and letters, yellow	£5.95
AM72015 US early/WWII style stars w/o bars	£4.25
AM72016 US star & bar blue outline	£4.25
AM72017 Ki-44 Tojo (LG1.85,7.246 Senta)	£4.25
AM72018 Ki-84 Frank (special attack sq.)	£4.25
AM72019 Ki-43 Oscar (2.17.47,50.46 Senta)	£4.25
AM72019 B-24 (716.726.845)	£4.25
AM72020 B-24 (44.456.484 BG)	£4.25
AM72021 Italian AF Bl-109G/K	£4.25
AM72022 P-40E/K (RSAF 11.16.25FS)	£4.25
AM72023 B-24D Poleski raiders	£4.25
AM72024 Camouflaged P-38s	£4.25
AM72025 Battle of Britain Spitfires	£4.95
AM72024 Bl-109F/G pt. 2 (JG5.53.302)	£4.25
AM72025 Zemke's Wolfpack P-47D/M	£4.95
AM72026 Fighting Lavochkins	£4.95
AM72027 Stalin's Cobras P-39s	£4.25
AM72028 Bl-110 (LG1.21G.52;NUG4)	£4.95
AM72029 Catalina Collection	£4.25
AM72041 Bl-109K Reich Defense pt.2	£4.95
AM72042 FW-190A Reich Defense pt. 3	£4.95
AM72043 A/B-26 Invaders	£4.25
AM72047 Luftwaffe national insignia Bl-109	£4.25
AM72048 Luftwaffe national insignia FW-190	£4.25
AM72049 Luft. national insignia 109/190	£4.25
AM72050 RAF Roundels Post '42 fighter a/c	£4.25
AM72051 RAF Roundels Pre '42 fighter a/c	£4.25
AM72052 FW-190A (LG1.52.26.51)	£4.95
AM72053 FW-190F	£4.95
AM72054 ME-262 pt. 1(EJ2/JG7;JG4;KG76)	£4.95
AM72055 ME-262 pt. 2(JG7;JG4;Schenk)	£4.95
AM72056 Tora, Tora, Tora pt.1	£4.95
AM72057 Tora, Tora, Tora pt.2	£4.95
AM72058 B-29 (794BS; 68G)	£4.25
AM72059 FW-190D-9 Reich Defense pt.5	£4.95
AM72060 FW-190D-9 Reich Defense pt.6	£4.95
AM72062 Ki-61 Tony (4 a/c)	£4.95
AM72063 Wildcats USN/USMC	£4.95
AM72065 Spitfire Mk V	£4.95
AM72070 Spitfire Mk XIV	£4.95
AM72071 Spitfires Down Under	£4.95
AM72072 Bl-109G Reich Defense pt.4	£4.95
AM72073 Desert War Bl-107E/Fs	£4.95
AM72074 Mediterranean Bl-109E/Gs	£4.95
AM72075 Mediterranean Bl-109F/Gs	£4.95
AM72076 Blue Nosed P-51B/Ds of Blodney	£4.95
AM72077 Aces of the 8th pt.3 P-51Ds	£4.95
AM72078 Aces of the 8th pt. 4 P-51Bs	£4.95
AM72081 P-40Ns 49th FG	£4.95
AM72081 Allied P-40Ns	£4.95
AM72085 AR-234B (1/F33;KG76;Sperling)	£4.95
AM72086 Zeros (6 a/c incl. Rufe)	£4.95
AM72087 AR-234B (1/F123;KG76)	£4.95
AM72089 Henschel HS-129	£4.95
AM72091 Bl-109E pt.1 (JG2.26.27.52)	£4.95
AM72091 F4F Wildcat pt.2 (VF-5.8.29.71)	£4.95
AM72091 JU-88A-4 (KG 3.30.51)	£4.95
AM72101 SBD Dauntless (CVS-2.3;VB-10.16)	£4.95
AM72102 Carrier Based Avengers (4 a/c)	£4.95
AM72111 F6F Hellcat (4 a/c)	£4.95
AEROMASTER DECALS 1/48th	
AMSP4801 Luftwaffe Top Guns	£8.50
AMSP4802 JG54 Greenhearts	£12.50
AMSP4803 US Top Guns	£10.95
AM48001 Bl-109G in Foreign service	£4.25
AM48002 Finish WWII Aces	£4.25
AM48003 FW-190A (JG1.11)	£4.25
AM48004 Bl-109G/K Reich Defense	£4.25
AM48005 Foreign Hurricanes	£4.25
AM48006 FW-190A (JG1.54.300)	£4.25
AM48007 Italian Bl-109G/Ks	£4.25
AM48008 Jap fighters (Ki-43;44,-61,-84)	£4.25
AM48009 Soviet La-5, I-16, Spifire Hurricane	£4.25
AM48010 Latin American P-47Ds	£4.25
AM48011 Ki-43 Oscars	£4.25
AM48012 Pacific Mustangs	£4.25
AM48013 Foreign Sea Furies	£4.25
AM48014 Battle of Britain Bl-109es	£4.25
AM48015 P-47Ds 56th FG	£4.25
AM48016 8th AF P-51D/Ks	£4.25
AM48017 Bright red Hinomarus	£7.75
AM48018 Dull red Hinomarus	£7.75
AM48019 Bl-109B-E national insignia	£4.25
AM48020 Bl-109F-G national insignia	£4.25
AM48021 Bl-190G-K national insignia	£4.25
AM48022 FW-190A/F early national insignia	£4.25
AM48023 FW-190A/F late national insignia	£4.25
AM48024 FW-190D/T-152 national insignia	£4.25
AM48025 Swastikas, 7 styles, various sizes	£4.25
AM48026 RAF Roundels, pre-1942, fighter a/c	£5.95
AM48027 RAF Roundels, post-1942, fighter a/c	£5.95
AM48028 USN 1941 F2A, OS2U, F4F (5a/c)	£4.25
AM48029 Pacific P-47D Razorbacks	£4.25
AM48030 F8F Bbercat Collection	£4.25
AM48031 Dutch East Indies Air Corps (S/a/c)	£4.25
AM48032 Ki-27 Nate (5a/c)	£4.25
AM48033 P-47Ds USAAF Seac (6a/c)	£4.25
AM48034 Foreign Bl-109Es (7a/c)	£4.25
AM48035 P-61 Black Widows (4a/c)	£4.25
AM48036 P-38s (7.80.94.431 FS)	£4.25
AM48037 Bl-109B-D (6a/c)	£4.25
AM48038 Bl-109G (JG3.51.54;Finnish)	£4.25
AM48039 Buffalo Collection USN/RAF	£4.25
AM48040 Ki-84 Frank (5a/c)	£4.25
AM48041 USN/USMC Wildcats	£4.25
AM48042 Spitfire Mk V (5a/c)	£4.25
AM48043 DH Mosquito FBVI (4a/c)	£4.95
AM48044 Spitfire Mk XIV RAF, SEAC, Blegian	£4.25
AM48045 Foreign Hurricanes pt.2 (5a/c)	£4.25
AM48046 US Aircraft in FAA service	£4.25
AM48047 Luftwaffe code numbers pt.1	£7.75
AM48048 Luftwaffe code numbers pt.2	£7.75
AM48049 US ID numbers black	£5.95
AM48050 US ID numbers white	£5.95
AM48051 US ID numbers Yellow	£5.95
AM48052 US ID/C Invader (90,86BS;363 TRW)	£4.25
AM48053 US national insignia pre-1941	£4.25
AM48054 US stars & bars, blue surround	£4.25
AM48055 USAC, 1938-41 (p-35-36-40)	£4.25
AM48056 Foreign P-40 Tomahawks	£4.25
AM48057 Desert P-40s/Bl-109s	£4.25
AM48058 Early P-38s (4a/c)	£4.25
AM48059 Typhoon IIb (6 a/c)	£4.25
AM48060 Foreign Hawk 75s	£4.25
AM48061 FW-190A (JG2.34.54;SG1.4)	£4.25
AM48062 Bl-190F/G pt.2 (6a/c)	£4.25
AM48063 Bl-190F/G pt.3 (6a/c)	£4.25
AM48064 Ki-44 Tojo (5a/c)	£4.25
AM48065 Sharkmouth P-40E/Ks (4a/c)	£4.25
AM48066 Bl-109E (5a/c)	£4.25
AM48067 P-40N 73s (3a/c)	£4.25
AM48068 P-38/JL (36.47.54;G.41FS)	£4.25
AM48069 Corsairs and Hellcats (6a/c)	£4.25
AM48070 Corsairs and Hellcats (4a/c)	£4.25
AM48071 Aces of the 8th pt.1	£4.95
AM48072 Aces of the 8th pt.2	£4.25
AM48073 Pacific P-51s (3a/c)	£4.25
AM48074 Fokker Dr1 (4a/c)	£4.25
AM48075 Spad 7.13 (7a/c)	£4.95
AM48076 P-41A-1A Corsairs (7a/c)	£4.25
AM48077 P-47 checkers & stripes	£4.25
AM48078 Bob Spitfire Mk I (8a/c)	£4.25
AM48079 Bob Spitfire Mk I (8a/c)	£4.95
AM48080 P-38s (338.384.459FS)	£4.25
AM48081 P-51B (33.38.459FS)	£4.25
AM48082 Recon Mosquitos, Spit. P-38	£4.25
AM48083 Thunderbolts Galore pt.2	£5.95
AM48084 P-38s (338.384.459FS)	£4.25
AM48085 SNUJ-6 Texans (6a/c)	£4.25
AM48086 Fighting Lavochkins pt.1	£4.25
AM48087 Fighting Lavochkins pt.2	£4.25
AM48088 B-25H (499,498BS)	£4.25
AM48089 Stalin's P-39 Cobras (4a/c)	£4.25
AM48090 Zemke's Wolfpack P-47D/Ms	£4.95
AM48091 Checkertail P-51Ds (4a/c)	£4.95
AM48092 Stalin's P-39 Cobras pt.2	£4.25
AM48093 Israeli Bl-16C/D (7a/c)	£5.95
AM48094 Doolittle D-520 pt.1	£4.25
AM48095 Doolittle D-520 pt.2	£4.25
AM48096 YAKs (6a/c)	£4.25
AM48097 Bl-109K Reich Defense pt.2	£5.95
AM48098 FW-190A Reich Defense pt.3	£4.25
AM48099 P-51Ds over Korea	£4.25
AM48100 Air war over Korea	£7.75
AM48101 A-26B Invaders (2a/c)	£4.25
AM48102 Invaders over Korea (3a/c)	£4.25
AM48103 FW-190F pt.3 (5a/c)	£4.25
AM48104 A-20G Havoc	£4.25
AM48105 Bl-109G Reich Defense pt.4	£4.25
AM48106 Early Mustangs (6a/c)	£4.25
AM48107 ME-262 (EJ2/JG7;KG76)	£4.25
AM48108 FW-190D-9 Reich Defense pt.5	£4.25
AM48109 FW-190D-9 Reich Defense pt.6	£4.25
AM48110 Bl-109D-9 Reich Defense pt.7	£4.25
AM48111 Bl-109E (JG2.51.51.51)	£4.25
AM48112 ME-262 (5a/c incl. NJG11)	£4.25
AM48113 P-47D (61.63.352FS)	£4.25
AM48114 B-24D Ploesti Raiders pt.2	£4.25
AM48115 B-24D Ploesti Raiders pt.2	£4.25
AM48116 Ki-61 Tony pt.1 (4a/c)	£4.95
AM48117 Tora, Tora, Tora pt.1	£4.95
AM48118 Tora, Tora, Tora pt.2	£4.95
AM48119 Israeli Avia S-199 (6a/c)	£4.25
AM48120 HE-111H (KG53.100)	£4.25
AM48121 HE-111H (KG27;StG3)	£4.25
AM48122 Spitfire Mk V pt.2	£4.95
AM48123 Spitfire Mk IX pt.1 (6a/c)	£4.95
AM48124 Australian Spitfires (4a/c)	£4.95
AM48125 P-40Ns 7.8Fs (5a/c)	£4.95
AM48126 Allied P-40Ns pt.2 (5a/c)	£4.95
AM48127 Desert Bl-109E/Fs JG27	£4.95
AM48128 Med Bl-109F/Gs JG27	£4.95
AM48129 Blue Nose P-51B/Ds (5a/c)	£4.95
AM48130 P-51B/Ds (5a/c)	£4.95
AM48131 P-51/Bs (5a/c)	£4.95
AM48132 P-51s of the 6th pt.4	£4.95
AM48133 SBD Dauntless (4a/c)	£4.95
AM48134 ME-262 (5a/c)	£4.95
AM48135 ME-262 (5a/c)	£4.95
AM48136 SBD Dauntless (4a/c)	£4.95
AM48137 Early FW-190A pt.1 (6a/b)	£4.95
AM48138 Early FW-190A pt.2 (JG1.2.2.26)	£4.95
AM48139 Early FW-190A pt.2 (JG1.2.2.26)	£4.95
AM48140 JU-87 Stukas pt.1	£4.95
AM48141 FIAT G-50 (7a/c)	£4.95
AM48142 FIAT G-50 (7a/c)	£4.95
AM48143 Bl-109E (5a/c)	£4.95
AM48144 FIAT G-50 (7a/c)	£4.95
AM48145 Allied P-40Ns pt.2 (4a/c)	£4.95
AM48146 Fokker I-4 (5a/c)	£4.95
AM48147 Fighting Lavochkins pt.3	£4.95
AM48148 Fokker I-4 (5a/c)	£4.95
AM48149 Fokker Dr1 (5a/c)	£4.95
AM48150 ME-109 (1940 pt.5) (5a/c)	£4.95
AM48151 F4F Wildcat Aces pt.1	£4.95
AM48152 F4F Wildcat Aces pt.2	£4.95
AM48153 F4F Wildcat Aces pt.3	£4.95
AM48154 F4F Wildcat Aces pt.4	£4.95
AM48155 F4F Wildcat Aces pt.5	£4.95
AM48156 F4F Wildcat Aces pt.6	£4.95
AM48157 F4F Wildcat Aces pt.7	£4.95
AM48158 F4F Wildcat Aces pt.8	£4.95
AM48159 F4F Wildcat Aces pt.9	£4.95
AM48160 F4F Wildcat Aces pt.10	£4.95
AM48161 F4F Wildcat Aces pt.11	£4.95
AM48162 F4F Wildcat Aces pt.12	£4.95
AM48163 Henschel HS-129 (5a/c)	£4.95
AM48164 ME-109 (1940 pt.5) (5a/c)	£4.95
AM48165 ME-109 (1940 pt.6) (5a/c)	£4.95
AM48166 ME-109 (1940 pt.7) (5a/c)	£4.95
AM48167 ME-109 (1940 pt.8) (5a/c)	£4.95
AM48168 ME-109 (1940 pt.9) (5a/c)	£4.95
AM48169 ME-109 (1940 pt.10) (5a/c)	£4.95
AM48170 Ki-44 Tojo pt.2 (5a/c)	£7.75
AM48171 Ki-44 Empire Defenders pt.2	£7.75
AM48172 Ki-44 Empire Defenders pt.2	£7.75
AM48173 Ki-44 Frank (5a/c)	£7.75
AM48174 F4F Wildcat (5a/c)	£7.75
AM48175 F4F Wildcat (5a/c)	£7.75
AM48176 F4F Wildcat (5a/c)	£7.75
AM48177 F4F Wildcat (5a/c)	£7.75
AM48178 F4F Wildcat (5a/c)	£7.75
AM48179 F4F Wildcat (5a/c)	£7.75
AM48180 F4F Wildcat (5a/c)	£7.75
AM48181 F4F Wildcat (5a/c)	£7.75
AM48182 F4F Wildcat (5a/c)	£7.75
AM48183 F4F Wildcat (5a/c)	£7.75
AM48184 F4F Wildcat (5a/c)	£7.75
AM48185 F4F Wildcat (5a/c)	£7.75
AM48186 F4F Wildcat (5a/c)	£7.75
AM48187 F4F Wildcat (5a/c)	£7.75
AM48188 F4F Wildcat (5a/c)	£7.75
AM48189 F4F Wildcat (5a/c)	£7.75
AM48190 F4F Wildcat (5a/c)	£7.75
AM48191 F4F Wildcat (5a/c)	£7.75
AM48192 F4F Wildcat (5a/c)	£7.75
AM48193 F4F Wildcat (5a/c)	£7.75
AM48194 F4F Wildcat (5a/c)	£7.75
AM48195 F4F Wildcat (5a/c)	£7.75
AM48196 F4F Wildcat (5a/c)	£7.75
AM48197 F4F Wildcat (5a/c)	£7.75
AM48198 F4F Wildcat (5a/c)	£7.75
AM48199 F4F Wildcat (5a/c)	£7.75
AM48200 F4F Wildcat (5a/c)	£7.75
AM48201 F4F Wildcat (5a/c)	£7.75
AM48202 F4F Wildcat (5a/c)	£7.75
AM48203 F4F Wildcat (5a/c)	£7.75
AM48204 F4F Wildcat (5a/c)	£7.75
AM48205 F4F Wildcat (5a/c)	£7.75
AM48206 F4F Wildcat (5a/c)	



PARAGON 1/72nd Scale	
7201	B-26K Counter Invader conversion
7202	A-26 Invader flaps
7203	A-26 Invader six-gun nose
7204	PB-1W conversion (B-17G)
7205	YB-40 Gunship conversion (B-17E)
7206	B-17 BTO Mickey Radome
7207	NEW SB-29 Conversion
7215	Mercedes 160 HP Inline
7216	Mercedes 180 HP Inline
7217	4 x Different WW1 German exhausts
7218	4 x 9.5mm WW1 wheels
7220	8 x Spannholz machine guns
7221	3 x 10.6" WW1 props without spinners
7223	3 x WW1 German prop washers
7223	2 x different WW1 radiators
7229	Mosquito P.R.21 bomber canopies
7230	Mosquito 0.303" open gun bays (Airfix)
7231	Mosquito flaps
7232	Mosquito bulged wheels
7233	Mosquito NF XV conversion (Matchbox)
7234	Sea Mosquito TR33 conversion (Airfix)
7235	Mosquito bulged bomb bay
7236	Mosquito camera bay
7237	Mosquito 'Twin Highball' conversion
7238	F-4 Phantom flaps
7239	Israeli RF-4ES Peace Jack' nose
7240	ASV MK II aerials
7241	RAF 100 Group Lancaster, Stirling and Halifax conversions (Airfix)
7242	RAF 100 Group B-17G and B-24JM conversions
7243	B-17 flaps
7244	B-17HSB-17G conversion

PARAGON 1/48th Scale

4801	2 x Tomato Standard Tanks
4802	2 x RAF Tomato Hindenburg Tanks
4803	2 x RAF Tomato JP233s
4804	RAF Tomato wing & fuselage pylons
4805	F-15E Strike Eagle update (Hasegawa)
4806	F-111 afterburners
4807	Tornado flaps and slats (Italeri)
4808	Tornado afterburners
4809	2 x Tomato MB MK10 seats
4810	Tornado BZ017 & Skyshadow pods
4811	Tornado bulged wheels
4812	F-111 flaps & slats (A/E/F/G/E/F-111)
4814	B-17F/G prop governors & wing intakes
4819	P-51D flaps (Hasegawa)
4820	Tornado front fin correction (Italeri)
4821	Tornado F3 wing pylon, AIM-9 rails, chaff dispensers
4822	6 x 0.50" Brownings (fixed type)
4823	6 x 0.50" Brownings (flexible type)
4824	P-38 flaps
4833	P-38 open gun bay
4834	2 x Jaguar MB MK9 ejection seats
4835	Jaguar afterburners, chaff dispensers, cannon bulges
4836	Jaguar flaps and slats
4837	Jaguar bulged wheels
4838	Jaguar Vinten recce pod
4839	Mosquito open gun bays
4840	Mosquito flaps (Airfix)
4841	Mosquito Molins conversion Tse-Tse
4842	Mosquito two-stage Merlins (Airfix)
4843	Mosquito 'Universal' radome
4844	Mosquito 'Thimble' radome
4845	ME-110C G open nose gun bay
4846	FW-190S/S-8 two-seat conversion
4848	PB-1W conversion (B-17G)
4849	YB-40 conversion (B-17F)
4850	B-17 BTO 'Mickey Radome'
4851	B-17E conversion
4852	B-17 crew access doors
4853	NEW S-3 Viking Bulged wheels
4854	2 x Buccaneer MK5 seats
4855	8 x RAF 60lb rockets
4858	NEW B-50 A/D conversion (B-29)
4859	NEW SB-29 conversion
4860	NEW Mosquito Narrow blade props
4870	Mosquito bomber nose conversion
4871	Mosquito NF XV conversion (Airfix)
4872	Sea Mosquito TR33 conversion (Airfix)
4873	Mosquito P.R. canopy
4874	Mosquito bulged bomb bay
4875	Mosquito bulged camera bay
4876	Mosquito 'Twin Highball' conversion
4877	Mosquito 50 gal. wing tanks
4878	Mosquito 100 gal. wing tanks
4879	F-105 Thunderchief flaps and slats
4880	F-105 Thunderchief open gun bay
4882	Buccaneer flaps
4883	Buccaneer bulged wheels
4884	F-4 Phantom flaps
4887	RF-4B/C/E conversion, early profile
4888	RF-4B/C/E conversion, late profile
4889	Israeli RF-4ES Peace Jack' nose
4890	CV-10A Bronco update
4891	OV-10D Bronco conversion
4892	RAF 100 Group Lancaster conversion
4893	RAF 100 Group B-17G and B-24JM conversion (Monogram)
4894	A-6 Intruder/E/A-6 Prowler flaps, slats and wing tip airbrakes (Monogram/Revell)
4895	RAF Jaguar T2 conversion
4896	A-26 Invader six-gun nose
4897	A-26 Invader eight-gun nose
4898	A-26 Invader open gun bay (eight-gun nose)
4899	A-26 Invader Pathfinder nose

POST AND PACKING INSTRUCTIONS: UK

Books	80p per book
1-5 detail kits/decals	50p
6 or more detail kits/decals	£1.00
1-5 conversion/update kits	£1.00
1-2 complete model kits	£1.50
3 or more model kits	£2.00

EUROPEAN COMMUNITY

Books	£1.20 per book
1-5 detail kits/decals	£1.00
6 or more detail kits/decals	£2.00
1-5 conversion/update kits	£2.00
1-2 complete model kits	£2.50
3 or more model kits	£3.00

OVERSEAS

Postage for overseas credit card orders will be charged at actual cost. 20% of order for all orders paid by International Money Order or bank cashier's cheque. All orders shipped airmail unless otherwise specified.

PAYMENT
Make cheques, Postal Orders, IMO's etc. payable in pounds sterling (£) to AVIA IMPORTS. Credit card orders please include card number, expiry date, card holder's name, and billing address of card.

RH086 1/48th P-38/L Lightning detail set £6.50

RH087 1/48th P-26 Peashooter detail set £5.95

RH088 1/48th P-36/H-75 Mohawk detail set £8.95

RH089 1/72nd Spitfire XIV/PRIX detail set £5.95

RH090 1/48th MIG-29 Fulcrum detail set £6.95

RH091 1/48th Lubomir fighter pilots x 3 £4.99

RH092 1/48th WW2 RAF Fighter pilots, set of 3 £4.99

RH093 1/48th USAF fighter pilots set of 3 £4.99

RH094 1/48th F-84 Thunderstreak detail set £5.95

RH095 1/48th Spitfire MK/V detail set £5.95

RH096 1/48th RF-84F Thunderflash detail set £5.95

RH097 1/48th F-86 Sabre detail set £5.95

RH098 1/48th Ju-87 Stuka interior set £5.95

RH099 1/48th Ju-87 Stuka exterior details £6.95

RH101 1/48th F4F-4 Wildcat detail kit £5.95

RH102 1/48th WWII Japanese army/navy pilots Set of 3 £4.99

RH103 1/48th WWII USN/Marines pilots Set of 3 £4.99

RH106 1/48th USAF Fighter Pilots Korea/50s era, set of 3 £5.95

RH107 1/48th Modern Russian jet pilots set of 3 £5.50

RH114 120mm astronaut 'Buzz' Aldrin £24.99

RH115 1/48th Soviet K36 seats x 2 £3.99

RH116 1/48th Luft desert pilots x 3 £5.50

RH121 1/48th Luft bomber crew x 5 £7.50

RH122 1/48th Phantom Ejection seats x 2 £10.95

RH123 120mm Litton RX2 Hardshell £19.99

RH125 1/48th USAF F-11 crew 70s/80s x 2 £9.95

RH127 NEW 1/32nd USAF F-4 crew 70s/80s x 2 £9.95

Elan 1/48th Resin Figures

EL001 RAF east jet crew £5.95

EL002 RN 1950's aircrew £5.95

EL003 WW1 German pilots £5.95

EL004 Luft desert pilots £5.95

EL005 WW1 British pilots £5.95

EL006 RAF pilots playing cricket £5.95

EL007 RAF/RN pilots 42-45 £5.95

EL008 NEW Luft mechanic and pilots painting rudder markings £5.95

EL009 NEW WW2 RAF/RN pilots seated £5.95

REHEAT MODELS etched brass and resin accessories

RH01	1/32nd ACES II ejection seat
RH02	1/72nd buckle & harness pack
RH03	1/48th buckle & harness pack
RH04	1/32nd buckle & harness pack
RH05	1/32nd Chuck Yeager figure (resin) suit Revell X-1
RH06	1/32nd modern USAF fighter pilot
RH07	1/32nd modern Luftwaffe Tomado crew, 2 figures, resin
RH08	1/72nd aircraft instruments, mod & vint, waterside
RH09	1/48th aircraft instruments, mod & vint, waterside
RH10	1/32nd aircraft instruments, mod & vint, waterside
RH11	1/32nd modern US Navy pilot, resin
RH12	1/32nd RAF Tomado crew, 2 figures, resin
RH13	1/32nd F-104 Starfighter pilot wearing M2 press suit
RH14	1/32nd F-14 Tomcat crew, 2 figures, resin
RH15	1/32nd modern US Navy pilot wearing NBS suit
RH16	1/32nd RAF Hunter pilot wearing NBS suit
RH17	1/32nd F-86 Sabre pilot, USAF Korea
RH18	1/72nd instrument bezels, vintage
RH19	1/32nd instrument bezels, vintage
RH20	1/32nd instrument bezels, vintage
RH21	1/72nd instrument bezels, vintage
RH22	1/32nd instrument bezels, vintage
RH23	1/72nd instrument bezels, modern
RH24	1/72nd instrument bezels, modern
RH25	1/48th instrument bezels, modern
RH26	1/32nd instrument bezels, modern
RH27	1/72nd instrument bezels, modern
RH28	1/72nd instrument bezels, modern
RH29	1/32nd instrument bezels, modern
RH30	1/72nd radar & CRT displays
RH31	1/48th radar & CRT displays
RH32	1/32nd radar & CRT displays
RH33	1/72nd cockpit switch controls
RH34	1/48th cockpit switch controls, 85 etchings
RH35	1/32nd cockpit switch controls, 60 etchings
RH36	1/32nd cockpit switch controls, 60 etchings
RH37	1/32nd WW2 Luftwaffe fighter pilot
RH38	1/32nd USAF fighter pilot, Europe WW2
RH39	120mm SR71 pilot
RH40	120mm Russian MiG pilot
RH41	120mm American P-51B pilot
RH42	1/72nd rudder pedals, mod & vint
RH43	1/48th rudder pedals, mod & vint
RH44	1/32nd rudder pedals, mod & vint
RH45	1/72nd cockpit trim wheels, etched
RH46	1/48th cockpit trim wheels, etched
RH47	1/32nd cockpit trim wheels, etched
RH48	1/72nd aircraft canopy details, vintage
RH49	1/48th aircraft canopy details, vintage
RH50	1/32nd aircraft canopy details, vintage
RH51	1/72nd aircraft canopy details, modern
RH52	1/48th aircraft canopy details, modern
RH53	1/32nd aircraft canopy details, modern
RH54	1/72nd aircraft canopy details, modern
RH55	1/48th T-33 detail set for Hobbycraft kit
RH56	1/48th F-80 Shooting Star detail set
RH57	1/48th T-33/F-94 flap & dive brake set
RH58	1/72nd Mirage 2000 C-N detail set
RH59	1/48th F9F-5 Panther detail set
RH60	1/48th F-100D/F detail set
RH61	1/72nd D.H. Vampire detail set
RH62	1/72nd Luftwaffe accessory set, seats, sights, ammo
RH63	1/48th Luftwaffe accessory set, seats, sights, ammo
RH64	1/48th P-51/D detail set
RH65	1/48th F-100D detail set
RH66	1/48th F-100D detail set
RH67	1/72nd USAF/USN accessory set, seats, sights, ammo
RH68	1/48th USAF/USN accessory set, seats, sights, ammo
RH69	1/48th P-51/D/B detail set
RH70	1/72nd P-51/D/B detail set
RH71	1/48th P-51/D/B detail set
RH72	1/48th P-51/D/B detail set
RH73	1/48th P-51/D/B detail set
RH74	1/48th P-51/D/B detail set
RH75	1/48th USAF/USN accessory set, seats, sights, ammo
RH76	1/48th Seversky P-35 detail set
RH77	1/48th Horset Ho-229 detail set
RH78	1/72nd F-100D/F detail set
RH79	1/48th F-100D detail set for Monogram kit
RH80	1/72nd P-51/B/C Mustang detail set
RH81	1/72nd P-51/D/K Mustang detail set
RH82	1/48th P-51/B/D detail set
RH83	1/72nd P-52/C detail set
RH84	1/48th P-52/C detail set
RH85	1/72nd P-52/C detail set
RH86	1/48th P-52/C detail set
RH87	1/48th P-52/C detail set
RH88	1/48th P-52/C detail set
RH89	1/48th P-52/C detail set
RH90	1/48th P-52/C detail set
RH91	1/48th P-52/C detail set
RH92	1/48th P-52/C detail set
RH93	1/48th P-52/C detail set
RH94	1/48th P-52/C detail set
RH95	1/48th P-52/C detail set
RH96	1/48th P-52/C detail set
RH97	1/48th P-52/C detail set
RH98	1/48th P-52/C detail set
RH99	1/48th P-52/C detail set
RH100	1/48th P-52/C detail set
RH101	1/48th P-52/C detail set
RH102	1/48th P-52/C detail set
RH103	1/48th P-52/C detail set
RH104	1/48th P-52/C detail set
RH105	1/48th P-52/C detail set
RH106	1/48th P-52/C detail set
RH107	1/48th P-52/C detail set
RH108	1/48th P-52/C detail set
RH109	1/48th P-52/C detail set
RH110	1/48th P-52/C detail set
RH111	1/48th P-52/C detail set
RH112	1/48th P-52/C detail set
RH113	1/48th P-52/C detail set
RH114	1/48th P-52/C detail set
RH115	1/48th P-52/C detail set
RH116	1/48th P-52/C detail set
RH117	1/48th P-52/C detail set
RH118	1/48th P-52/C detail set
RH119	1/48th P-52/C detail set
RH120	1/48th P-52/C detail set
RH121	1/48th P-52/C detail set
RH122	1/48th P-52/C detail set
RH123	1/48th P-52/C detail set
RH124	1/48th P-52/C detail set
RH125	1/48th P-52/C detail set
RH126	1/48th P-52/C detail set
RH127	1/48th P-52/C detail set
RH128	1/48th P-52/C detail set
RH129	1/48th P-52/C detail set
RH130	1/48th P-52/C detail set
RH131	1/48th P-52/C detail set
RH132	1/48th P-52/C detail set
RH133	1/48th P-52/C detail set
RH134	1/48th P-52/C detail set
RH135	1/48th P-52/C detail set
RH136	1/48th P-52/C detail set
RH137	1/48th P-52/C detail set
RH138	1/48th P-52/C detail set
RH139	1/48th P-52/C detail set
RH14	

MAINTRACK MODELS

79 Queens Road, Hastings, East Sussex TN34 1RL
Telephone: 01424 437428

RECENT RELEASES

SQUADRON/SIGNAL 'In Action' Books
Heinkel He 112 £7.99
Gumman Biplane & Fighters £7.99

SQUADRON/SIGNAL 'Walkaround' Books
PBY Catalina £12.99
Boeing B-52 Stratofortress £12.99

GLENCOE 1:48 (with multi decal options)
Nieuport 28C-1 £10.99
Pfalz D-III £10.99
Spad XIII £10.99

A.M.T. 1:72
Northrop YB-49 Jet Flying Wing £26.99

Injection Moulded kit from Russia
Ilyu Maumot Bomber 1:72 £11.95

PAVLA 1:72 Back in stock!
Fieseler F1 - 167 £8.99
Nakajima K1 - 87 £9.99
Bell 47G helicopter (new) £14.95

AEROMASTER 1:48 DECALS
48-190 Macchi 205 £4.25
48-201 P-38 Airacobra £4.25
48-209 Fokker DXXI £4.25
48-209 Spad XIII (Pt1) £4.50
48-210 Spitfire VIII, IX £4.25
48-211 P-51B Mustang (Part 1) £4.25
48-214 P-51B/C (Part IV) £4.25
48-220 Hungarian AF (BF 109s) Pt 1 £4.95
48-221 Hungarian AF (109s/190s) 2 £5.95
48-222 Operation Boden Platte (1) £5.95
48-223 Operation Boden Platte (2) £5.95
48-227 Bf 109s of JG3 £4.95
48-228 Bf 109s of JG3 £4.95
48-229 Korean War MiG Aces (1) £4.25
48-230 Korean War MiG Aces (2) £4.25
48-234 Foreign Catalina (1) £4.25

AEROMASTER 1:48 STENCILING **ng**
148-006 Bf 109E Stencils £1.95
148-007 Bf 109F/G/K £1.95
148-008 P-51B/C/D £1.95
148-009 Spitfire £1.95
148-010 Focke-Wulf FW 190 £1.95

M.P.M. 1:72
Curtiss BF2c-Hawk III £9.99
Focke-Wulf FW 190V-1 £9.99
Northrop 3PB-1 £9.99

PEGASUS 1:72
Albatross D.III (OEF) £19.99

PEGASUS DECALS 1:72
Belgian Roundels £3.50
German WW1 Naval Lozenge £4.95

L.T.D. 1:42 Limited run injection
Lavochkin LaGG-3 £23.50
Commonwealth Boomerang £23.50

MODELS U.S.A.
Cessna 0-1E Bird Dog £13.99

HIGH PLANES MODELS 1:72 Limited run injection
DAP Bristol Beaufighter II £19.95
DAP Bristol 'Beaufighter' £19.95

KENDALL MODEL COMPANY

1:48 Resin Accessory Kits
5016 P-51D Propeller (cuffed) £4.95
5017 FW 190D-9 Control Surfaces £6.95
5019 P-40 Control Surfaces £6.95
5020 F-4F Etched cow flaps £2.95
5021 P-47N etched cow flaps £2.95
5022 A6M3 etched cow flaps £2.95
5023 SBD-3 etched cow flaps £2.95
5026 F6F-3 etched cow flaps £2.95
5029 F6F-3 Control surfaces £10.95
5030 Japanese 250kg bombs £6.95
5032 Kettenkraftrad £22.95
5033 Se 250kg bomb with sled £9.95
5034 P-39 Airacobra Control surfaces £6.95
4007 S-3B Viking upgrade £13.95

1:48 Resin Luftwaffe WWII Bombs
5024 SC-250 Minenbombs x 4 £4.95
5025 SC-500 Minenbombs x 2 £4.95
5026 SD-500 Splitterbombs x 3 £4.95
5027 PC-1000 Panzersprengbombs x 2 £4.95

1:72 Resin Accessory Kits
7001 SBD-3 Detail Set £14.95
7002 SBD-3 Control surfaces £3.50
7003 SC-250 Minenbombs x 4 £3.95
7004 SC-500 Minenbombs x 4 £3.95
7005 SD-500 Splitterbombs x 4 £4.95
7006 PC-1000 Panzersprengbombs x 4 £4.95

KENDAL MODEL COMPANY 1:32
F-4C/D Formation Light stripe (etched) £4.75

BLUE RIDER Decals 1:72
BR242 Airco D.1-1 markings £3.50
BR241 UFAG C-1 Markings £3.50

BR242 Chinese Air Force 1937-45 £3.50
BR243 Colourful Pup 1918 £3.50
BR244 Imp. Russian Air Service (2) £3.50
BR245 Fokker Dr.1 Jasta 11, 27 £3.50

BR305 Puerto Rico ANG P-47N £2.99
BR411 Czech. Polish Albatross DIII £2.80
BR412 Nicaraguan Air Force £2.80

REVEL 1:72 back in stock....
Henshel He 129B £3.95
Fairay Fulmar £5.25
F7F-3 Tigercat £5.95

LZ-129 Hindenburg airship £12.50

REVEL 1:144
Sikorsky HH-53C £14.95
back in stock....
Fokker 100 £8.95

TESTORS AIRBRUSH
This fabulous Airbrush is still available from us at the SPECIAL PRICE of only £69.50
Normal U.K. retail is over £100
Why wait? Order yours now!

NEWS FROM MAINTRACK RESIN CONVERSIONS
72:36 The Hawker Tornado Prototype £7.99

containing resin replacement fuselage and clear canopy to convert the AIRFIX TYPHOON

POSTAGE UK
Up to £5 - £1.00 Up to £30 - £3.00
Up to £15 - £2.00 Over £30 - Post Free

POSTAGE-OVERSEAS

At actual cost by Credit Card

SUPERSCALE 1:72 £9.95 each
72-724 Bf 109F/G/K incl Priller

72-725 Fw 190D
72-727 Me 262A-1a incl Nowotny

AIRFIX 1:72 Re-issues £8.25
Fairey Rotodyne
Bristol Superfreighter £8.99

SUPERSCALE 1:48 Decals £8.50
48-552 Me 262A-1s incl Nowotny
48-553 Messerschmitt Me 262A-1a/2.2a
48-554 P-51Bs - 3 a/c
48-555 P-51Bs - 3 a/c

back in stock

TESTORS 1:72 £4.99
Supermarina Swift F4
Douglas F4D-1 Skyray
Convair XF-92A Dart
F-84F Thunderstreak
Gloster Javelin

TESTORS 1:48 £10.99
RF-4C Phantom 'Spirit of America'
Lockheed U-2C £10.99
Cessna O-2A Skymaster
OV-10A Bronco
F-5A Freedom Fighter £7.99

SHOP OPEN
Mon-Sat 09.30 - 17.30
(lunch 1-2, closed Wednesday pm.)
BARCLAYCARD/VISA/DINERS/ACCESS,
MASTERCARD, AMEX, SWITCH accepted

KINGKIT

THE ORIGINAL KIT DEALER (Est. 1983)



UNMADE PLASTIC KITS BOUGHT AND SOLD

A selection from our stock
Full catalogue £2.50

Visitors welcome,
but please phone first

AIRFIX 1:72
Fairey Firefly £9.99
Fairey Battle £6.99
Avro Anson £9.99
HS Dominie £9.99
HP Hampden £9.99
Canberra B(1) 6 £19.99
Avro 504K £9.99
BN Islander £14.99
F86D Sabre £6.99
Whirlwind Fighter £6.99

MATCHBOX 1:72
Handley Page Halifax Mki/II £11.50
Supermarine Stranraer £11.50

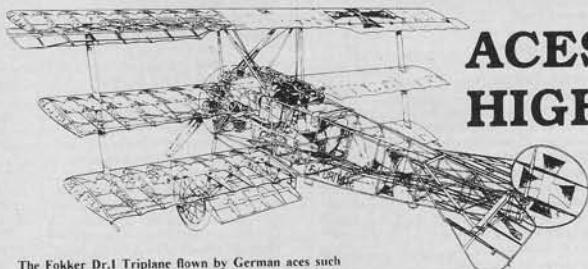
U.K. P&P £3.50, OVERSEAS VIA CREDIT CARD

SPRINGHILL TRADING ESTATE,

TEL: 01952 405020
FAX: 01952 405030
(4 mins from J3 M54)



ACES HIGH



The Fokker Dr.I Triplane flown by German aces such as Werner Voss and Manfred von Richthofen. If you are interested in any aspect of World War One Aviation, join this Society. The annual subscription of £17 (\$30 US) includes a high quality Journal.

Membership Secretary
6 Cowper Road, Southgate
LONDON, N14 5RP



CROSS & COCKADE INTERNATIONAL

THE FIRST WORLD WAR AVIATION HISTORICAL SOCIETY

SAMONE HOBBIES

VALENTINE 1/35 £14.95
SEA VENOM £9.95
LIGHTENING F6 £6.95
MIG 25 £6.96

(Opposite Civic Theatre)
98 PARKGATE
DARLINGTON
DL1 1RX

ZIS 5 1/35 £11.95
HALIFAX £8.95
BRONCO £6.95
DAVNTLESS £6.95

FAX 01325 358991

TEL 01325 352361

WE PURCHASE KIT COLLECTIONS 1 OR 1000

GIVE US A CALL

A SERVICE TO MODELLERS AND COLLECTORS
OF PLASTIC KITS

SEND £3.00 FOR CATALOGUE X OR £4.50 (\$6) OVERSEAS



POST & PACKING £3.50 (UK) - OVERSEAS ASK FOR QUOTE

Little Signs

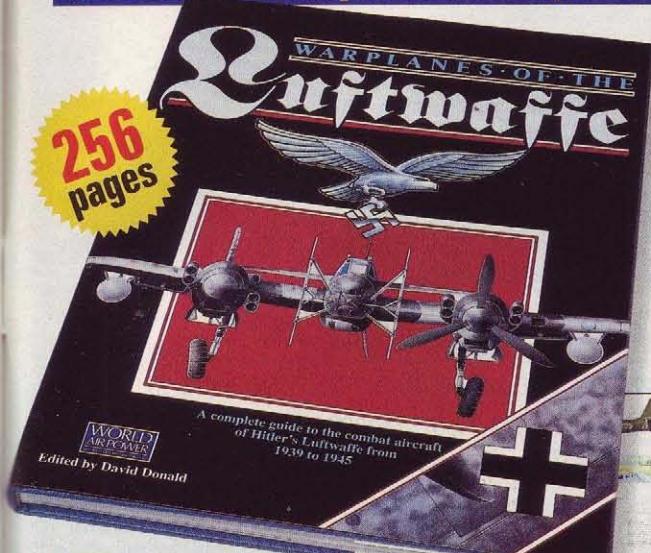
Engravers to
Model Makers

63 Manvers Road,
Westbrigford,
Nottingham, NG2 6DJ
(0115) 9141807

COPY DEADLINE
10th JUNE
for
Volume 2 Issue 7
July 1996

WARPLANES OF THE LUFTWAFFE

The most complete and spectacular encyclopedia of Hitler's aircraft



Inside this amazing volume...

Descriptions and specifications of every aircraft

70 detailed Luftwaffe aircraft entries

170 superb colour profile drawings

386 rare photographs, many in colour

26 fully annotated 3-view drawings

22 highly detailed cutaway drawings



VARIANTS

Detailed variant analysis
— including 'Rustsätze' and 'Umrust-Bausätze'



7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7

7



An Intercontinental Video Experience

Civil Aviation Videos

On board Airbus A320, B747-400, B767-300ER, Airbus A320 Simulator, B747-200



1 Capt. Alan Dix escorts you on a journey from Birmingham (UK) - Zakynthos - Birmingham

Amongst the many subjects discussed in this programme on the A320 are Fly-by-Wire, How to programme the Flight Management and Guidance System, Navigation, Hydraulics to name but a few. Approx. duration: 85 mins. Colour.

2 Capt. Don Grange takes you on a trip from London Heathrow into Kai Tak, Hong Kong

Take your seat aboard this Boeing 747-400 for a flight from London to Hong Kong. During the programme we also take you into the flight simulator to show you procedures and facts about flying this incredible aircraft. Approx. duration: 60 mins. Colour.

3 Capt. David Henry guides you over the Atlantic from London Gatwick into Orlando, USA

During our Boeing 767-300ER Atlantic crossing you will learn about such things as the North Atlantic Track, ETOPS (Extended Twin range Operations) and the implications of flying a twin engine aircraft over the Atlantic. Approx. duration: 80 mins. Colour.

4 Capt. Alan Dix invites you to join him on the Airbus A320 flight simulator

In your "visit" to the simulator Alan takes you through many manoeuvres that airline pilots have to train for. You will see Rejected Take Off, Engine failure after V1, plus how to accomplish a barrel roll in the A320! Approx. duration: 73 mins. Colour.

5 Capt. Guy Stephenson takes you on a round trip from London Gatwick to Miami, USA

Take a guided tour aboard this Boeing 747-200 "Classic" aircraft, including a detailed look at the Flight Engineers panel. Other topics covered are Inertial Navigation System, Selcal, Traffic Alert and Collision Avoidance System, to name but a few. Approx. duration 112 mins. Colour.

DEALER ENQUIRIES WELCOME

Intelligent Television and Video Limited, 77-78 Westborough, Scarborough, North Yorkshire, YO11 1TP, England
Telephone 01723 500767 Facsimile 01723 501208. International: Telephone +44 1723 500767 Facsimile +44 1723 501208

Please complete this section in block capitals and send to the above address

NAME

ADDRESS

COUNTRY POST CODE

TEL FAX

1 A320 **2** 747-400 **3** 767-300ER **4** A320 Simulator **5** 747-200

VHS PAL (UK format) VHS NTSC (US format) Price per video £21.95

Delivery: UK FREE E.C. Please add £2.00 per video REST OF WORLD Please add £3.00 per video

Orders received by 4.30p.m. despatched same day, 1st class post/airmail, subject to stock. Please make cheques payable to Intelligent Television and Video Limited

Call the Credit Card Hotline Now!!!

on Freephone 0800 137423



SAM 96

Presented with Scale Aviation Modeller

FEATURING
PREVIOUSLY
UNPUBLISHED
PICTURES

Training the Luftwaffe

part 2... Eagles on the Wing

by Barry
Ketley

Scale
AVIATION
Modeller

Aero-Outline
Number 2

Training by Combat – the fighter pilots

When World War II began the Luftwaffe possessed a sizeable number of fully trained and efficient aircrew. Despite the loss of such men during the campaigns in Scandinavia, France and the Low Countries, and the even more grievous losses during the Battle of Britain, there was still a sufficient reservoir of crews to sustain operations without major difficulty. Within a year of the ill-judged invasion of Russia however, this situation quickly changed and the number of trained crews leaving the schools began to be outstripped by the accelerating toll of casualties on the Eastern Front. The most serious shortages were in the ranks of the *Jagdflieger*; where experienced fighter pilots who had survived earlier campaigns were being lost at an alarming rate. Ultimately, the ramifications of the earlier negligence on the part of the Luftwaffe High Command concerning the training of fighter pilots were to be seen in the skies over the Reich itself, where progressively outnumbered German squadrons attempted to deflect the massive Allied aerial armadas.

Until 1942 Luftwaffe commanders had, deliberately or otherwise, been able to ignore the accumulating effects of operational demands upon the training system. By the summer of that year the consequences could no longer be denied and the first units to feel the contraction and deterioration in both the numbers and quality of trained pilots and crews were the fighter squadrons. As previously noted, under the existing system trainees received their basic military training at an FAR, potential NCO pilots and aircrew then passing through the A/B schools, outline details of which were given earlier. Officer candidates, for their part, attended a Luftkriegschule for additional training in tactics, air force law, military discipline and regulations etc., as well as the basic flying skills. Brief histories of the LK schools, which brought the potential pilot officer up to 'B' Certificate level, are shown in *Table 1*.

Following the award of his pilot's badge, the trainee then joined

one of the *Jagdfliegervorschulen* for initial fighter training where he was allowed to fly various obsolete or foreign single-seat fighter aircraft. Prominent amongst these were such old-stagers as the Ar 68 and He 51 biplanes, early model Bf 109 and French Dewoitine D.520 monoplanes and assorted captured machines. Initial training was followed by more demanding aircraft and exercises at a *Jagdfliegerschule* (JFS), *Table 2*.

Table 2

Unit	Date Formed	Main Bases Used
JVS 1	?	Kamenz/Saxony
JVS 2	?	Lachen-Speyerdorf
JVS 3	?	Vienna-Schwechat, Neubiberg
JVS 4	?	Fürth
JVS 5	?	Vienna-Schwechat, Jagdfliegerschulen
JFS 1	1939	Werneuchen, First formed 1937
JFS 2	1939	Schleißheim, First formed 1934
JFS 3	1939	Stolp-Reitz, Grove, Bad Aibling
JFS 4	1939	Fürth
JFS 5	1939	Vienna-Schwechat, Villacoublay, Gyancourt
JFS 6	?	Lachen-Speyerdorf, Eichborn

Eventually, the newly fledged *Jagdflieger* was permitted to try out his skills in a fully operational aircraft when he was posted to the IV Gruppe – the *Ergänzungsgruppe* (training group) – of his allotted Geschwader. The intention was to allow the new pilots time to gain precious operational experience before being hurled into the front line. Here, it should be noted, the unit was under the control of the local Luftflotte commander, who was frequently under considerable operational pressure to use whatever forces he had available. As a result the trainee's stay in the IV Gruppe was all too often quite brief.

TABLE 1

School	Date Formed	Main Bases Used	Comments
LKS 1	January 1940	Dresden, Riesa-Leutewitz, Kamenz	First formed as LKS Dresden, April 1936
LKS 2	January 1940	Berlin-Gatow, Güterfelde, Reinsdorf	First formed as LKS Berlin-Gatow, April 1936, Closed October 1944
LKS 3	January 1940	Wildpark-Werder, Magdeburg Borkheide, Güterfelde	Formed January 1936 as LKS Werder/Havel. Merged with FFS A 61 at Oschatz, May 1944
LKS 4	January 1940	Fürstenfeldbruck, Bad Wörishofen, Neu-Ulm, Kempten-Durach, Schongau	Formed 1937 as LKS Fürstenfeldbruck. Closed 1944
LKS 5	January 1940	Breslau-Schöngarten	Formed March 1939 as LKS Breslau-Schöngarten Closed September 1944
LKS 6	Autumn 1944	Kitzingen	Brief existence only
LKS 7	January 1940	Tulln, Langenlebarn, Budweis, Seyring	Formed October 1939. Existed until December 1944
LKS 8	-	-	Flak unit
LKS 9	1942	Tschenstochau, Werneck	Sport gliding only
LKS 10	May 1944	Fürstenwalde/Spree	To Straubing January 1945
LKS 11	End 1944	Straubing	Formed from FFS A/B 121 qv
LKS 12	End 1944	Bug am Rügen	Non-flying unit
LKS 13	?	Halle/Saale	Flying only in connection with the signals unit based there

Published by: **SAM Publications**
DMZee Marketing Ltd,
24 Grove Place,
Bedford MK40 3TJ
Telephone: 01234 216016
Fax: 01234 261251
Email: dmzee@kbnnet.co.uk

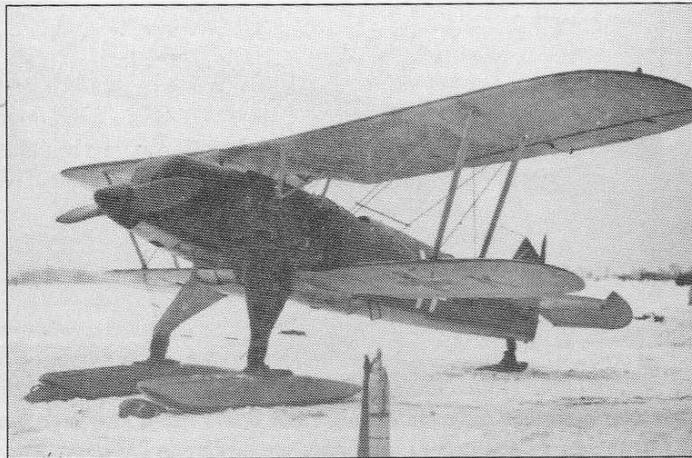


© DMZee Marketing Ltd June 1996

Front Cover Picture:

Henschel Hs 123 in training school service. Original code ??+AW, white '25', Werk No. 2303. Flown by August Diemer at Stuka Vorschule 1, Bad Aibling 1940-41.

The writer wishes to offer grateful thanks to the Archive of Modern Conflict for their help in supplying the bulk of the pictures in this Aero-Outline, most of which have not previously been published.



A highly unusual picture of a Heinkel He 51 fighter trainer on skis. The underwing code appears to be H?+IK, and the oversized swastika which can just be seen on the fin suggests that the date may be winter 1939-40. Location unknown.

At first this system worked well enough, but the loss of so many experienced pilots meant that there was insufficient man power to carry out the training function in the operational squadrons, which therefore became more and more abbreviated. Consequently, the result was the disbandment of the Ergänzungsgruppen in summer of 1942 and the formation of three Fighter Pools situated in the three main operational areas of the Luftwaffe i.e.: in the South at Cazaux in France (*ErgänzungsJagdgruppe Süd – EJGr Süd*); in the Reich, (West) at Mannheim (*ErgänzungsJagdgruppe – EJGr West*) and in the East at Krakow in occupied Poland (*ErgänzungsJagdgruppe Ost – EJGr Ost*). In future, operational units were to draw their replacement crews from these pools. However, although this reduced the number of instructors required, it also had the effect of curtailing operational training of new pilots at the very time such experience was becoming vitally necessary to the newcomers. Equally seriously, the elimination of what was in effect a fully-crewed, albeit only part-trained reserve in the Ergänzungsgruppen, led to a dilution in front-line strength.

Another aspect of the changed situation was that from spring 1943, the specialised fighter and bomber training schools were put on a more operational footing, ceasing to be designated as fighter schools (JFS), but becoming *Jagdgeschwader* (JG) shown in Table 3.

Table 3

JFS	JG	Main Bases Used
JFS 1	JG 101	Werneuchen, Pau, Schongau
JFS 2	JG 102	Zerbst, Stolp-Reitz
JFS 3	JG 103	Bad Aibling, Chateauroux, Stolp-Reitz, Pütnitz
JFS 4	JG 104	Fürth/Roth
JFS 5	JG 105	Villacoublay, Chartres, Bourges, Gyancourt, Markersdorf
JFS 6	JG 106 JG 107 JG 108 JG 109 JG 110	Lachen-Speyerdorf, Reichenbach Nancy, Tapolca, Steinamanger, Markersdorf Bad Vöslau/Stuhlweissenberg, Wiener-Neustadt Stolp-Reitz Altenburg, Graz, Swinemünde

There were in addition to the above, two *Zerstörerschulen* – Heavy Fighter Schools 1 and 2 – based at Schleißheim and Memmingen respectively and used to train pilots intended for the

Messerschmitt Bf 110, Me 410 and Ju 88 fighter squadrons. ZS 2 became ZG 101 in the spring of 1943.

So far, only passing mention has been made of night fighting. The question of intercepting enemy aircraft in the dark had scarcely been considered at the outbreak of war, but as the RAF's nocturnal raids began to become ever more damaging, the Luftwaffe was forced to react. Night fighter pilots were by the nature of their task required to be better trained, particularly in blind and bad weather flying, than their comrades operating in daylight. With a syllabus that laid heavy emphasis on instrument flying skills, more akin to that of bomber crews, it is perhaps not so surprising to find that there were so few *Nachtjagdschulen*. The excessive vulnerability of the *Zerstörer* heavy fighter aircraft by day led to these units converting to night fighting, with an attendant need for training. The first night fighter school was therefore formed at Schleißheim, the pupils receiving their final polish with the training Staffeln of the operational units from 1941 onwards. By the autumn of 1942 other training units had been formed in the south of Germany, their designations reflecting the rather ad hoc nature of the entire night fighter force. Later formations followed the more standardised numbering of semi-operational units begun in spring 1943, *Table 4*.

Table 4

Unit	Date formed	Main Bases Used
NJS 1	1940	Schleißheim
Erg./NJG 1	1942	Stuttgart/Echterdingen
NJS 2	1943?	Stuttgart/Echterdingen
III/NJG 3	1942	Nellingen
8.NJG/3	1942	Ingolstadt
4.NJG/4	1942	Laupheim
NJG 101	1943	Manching, Schleißheim, Munich-Reim
NJG 102	1943	Kitzingen, Powanden, Oels, Prague-Gbell

Some of the types used in the advanced fighter schools are described below:

Arado Ar 68

Last fighter biplane to enter service with the Luftwaffe, the Arado Ar 68 was intended to be a replacement for the Heinkel He 51. A conventional machine with an open cockpit and a neat cantilever undercarriage, the unequal span and chord wings were of wood, covered with ply and fabric. The fuselage structure was typical for the period, being of welded steel tubes covered with metal and fabric, with a distinctively shaped fin and rudder which was to become a hallmark of several later Arado designs. First flown in 1934, the prototype, D-IKIN, powered by a 750 hp BMW V12 inline engine, lacked power. In turn, D-IBAS, the third prototype, was fitted with a new Junkers Jumo 210 liquid-cooled engine which brought performance up to requirements. This version was therefore ordered into production as the Ar 68E. Shortages of the Junkers engines however, led to a decision to begin production of the BMW powered version as the Ar 68F. In late summer 1936, I/JG 134 and I/JG 131 became the first units to be equipped with the type. By the time the Ar 68E started to arrive in the squadrons in spring 1937, the age of the biplane was clearly over. Three Ar 68Es were delivered to Spain for trials as nightfighters, but the far superior Messerschmitt Bf 109 had arrived, consequently most Ar 68 models were quickly transferred to the fighter schools. A few saw service as temporary nightfighters with 10.(N)/JG 53, 10.(N)/JG 72 and 11.(N)/JG 72. Amongst schools known to have used the Ar 68 are A/B 14, A/B 23, A/B 32, A/B 33 and A/B 115.

Data for the Ar 68E:

- Span: 11.00m / 36 ft 1 in
- Length: 9.50m / 31 ft 2 in
- Weight: 2,020 kg / 4,454 lb (Fully loaded)
- Max Speed: 335 kmh / 208 mph

Heinkel He 51

Developed from a series of little prototype He 49 'sports' biplanes produced during the early 1930s, the Heinkel He 51 was ordered into production before the Luftwaffe officially existed. Ten He 51A-0 aircraft, all civilian registered, were built in 1933, followed by the A-1 series in 1934. These were fully-equipped fighters and formed the first squadron of the resurgent Luftwaffe, JG 132 *Richthofen*, in March 1935. 75 He 51A-1 machines were built, succeeded by a batch of structurally improved B-0 versions. Thirty-eight examples of the B-2 ship-borne floatplane version followed for service on the *Kriegsmarine* cruisers. An entirely conventional, if rather menacing looking biplane of all-metal construction covered with fabric, powered by a BMW VI in-line engine giving 550 hp and carrying two MG 17 machine guns, the elegant Heinkel



© The Archive of Modern Conflict

An elderly Messerschmitt Bf 109D-1 in use as a fighter trainer with an unknown Luftwaffe training school serves as a backdrop for a picture of the ground crew. The style of the crosses and camouflage scheme, and the huge underwing code letters PB+?? serve to date the picture to about 1941, probably somewhere in Germany.

relegated to ground attack duties, a role in which, to everyone's surprise, it was extremely successful. The result was the He 51C, fitted with bomb racks for 50 kg bombs intended specifically for low-level close support, 79 of which were built under licence by



© The Archive of Modern Conflict

A Messerschmitt Bf 110C, BO+AW, in service at Bad Aibling. Winter 1940/41.

was a natural subject for the Nazi propaganda machine. The outbreak of the Spanish Civil War in summer 1936 gave an opportunity to demonstrate the superiority of German aircraft when an initial batch of 6, rapidly followed by another 36, were sent to Spain to aid the Nationalists. All too quickly it became evident that the basic design concept of the He 51 was out-dated. Several aircraft were soon damaged by the type's tendency to bounce and veer on landing. Even worse, the opposing Soviet-supplied I-15 fighters so completely outclassed the Heinkels that they were forced to avoid combat. By April 1937 the He 51 was being

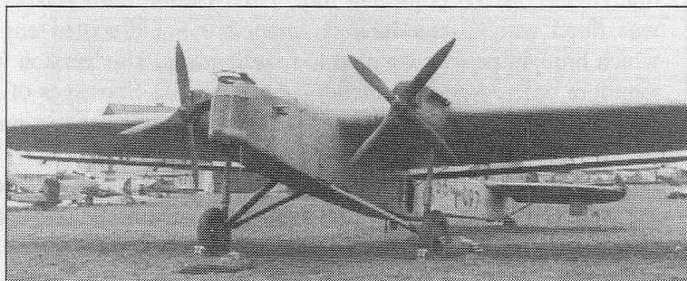
Fieseler-Flugzeugbau. Under the command of Adolf Galland, the close support He 51 units effectively wrote the manual which was to stand the Luftwaffe in such good stead during World War 2. Overtaken by more modern aircraft, surviving He 51s in Germany were relegated to the fighter schools where their idiosyncratic landing characteristics gave student pilots interesting experiences. Schools known to have used the He 51 include A 43, A/B 71, A/B 120, A/B 123 and LKS 2. Data for the He 51A-1:

- Span: 11.00m / 36 ft 1 in
- Length: 8.40m / 27 ft 6 3/4 in
- Weight: 1,900 kg / 4,189 lb (Fully loaded)
- Max Speed: 330 kmh / 205 mph

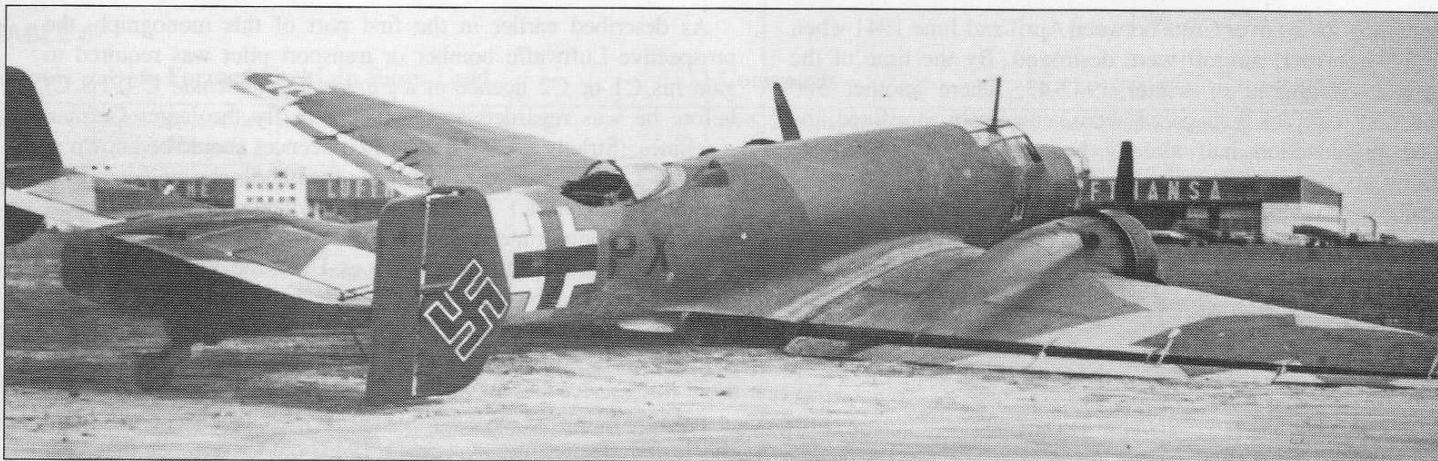
Dewoitine D 520

The great hope of the French fighter squadrons in 1939, the Dewoitine D 520 was the only fighter in French service at the time of the German assault in May 1940 capable of meeting the Messerschmitt Bf 109E on something like equal terms. Had it not been for the fall of France, it is possible that the D 520 would have enjoyed a similar career to the Spitfire or Bf 109.

A successor to earlier monoplane fighters from the Dewoitine company, the D 520 resulted from a private venture by the company which resulted in an order for two prototypes in April 1938. By October 1938 the first prototype was ready for flight. A low wing all metal monoplane with a retractable undercarriage and an engaging



A Dornier Do 23, S6+C97, aircraft '97' of 'C' flight of a School attached to Luftkreis 6. An interesting affiliation as Luftkreis 6 was essentially concerned with marine aviation activities along the Baltic coast. A Ju W 34 and a rudderless He70 can be seen in the background.



Crashlanded Junkers Ju 86E, ??+PX, still wearing the pre-war three colour camouflage scheme. The barely discernible insignia under the cockpit may be that of FFS (C) 21. Location believed to be Prague. Via R.L. Ward

© R.L. Ward via B.E.Kelley

toy-like quality with its long nose and short fuselage, testing quickly discovered a number of shortcomings. D 520-03, the third prototype, incorporated modifications to the tail, cockpit canopy and undercarriage and established the essential features of the production versions. Powered by an Hispano-Suiza 12Y 45 in-line engine of 930 hp, giving a top speed of 332 mph and armed with a 20 mm cannon in the propeller hub and four 7.5 mm machine guns in the wings, the D 520 was a potent weapon. Clearly superior to all other French fighters then in service, 1,280 examples were on order by the outbreak of war. However, as a result of ill-judged nationalisation, the French aircraft industry was in a complete shambles and only 403 had actually been delivered by the time of France's defeat. In fact, only 79 had been accepted by the *Armée de l'Air* by May 10. Those that were delivered acquitted themselves well, being responsible for 108 confirmed air victories between January and June 1940.

With over 320 left on charge, the Germans agreed that production could continue to equip the Armistice Air Force. When the Germans finally occupied the whole of France in November 1942, they seized 245 examples of the D 520 and instructed that another 150 be delivered by June 1944. The Dewoitines were put quickly into service as advanced trainers, a considerable number being passed on to German allies, notably Italy and Bulgaria. Three German fighter training wings were equipped with the little fighter – JG 101 and JG 103 were partially equipped, while JG 105, based at Chartres, was entirely equipped with the type. Few survived the handling of student pilots, only 55 or so remaining to be recaptured by the Allies.

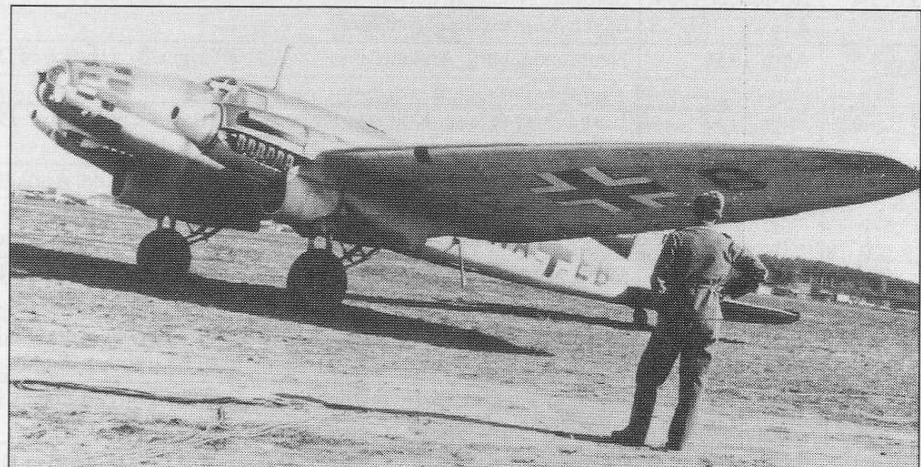
- Span: 10.20m / 33 ft 5 1/2 in)
- Length: 8.76m / 28 ft 9 in)
- Weight: 2,783 kg / 6,144 lb (Fully loaded)
- Max Speed: 535 kmh / 332 mph

Morane-Saulnier MS 230 Et

Flown for the first time in February 1929, the MS 230 was a logical progression in the long line of parasol monoplanes from Morane-Saulnier stretching back to World War 1. Of fabric covered mixed wood and metal construction, with a sturdy wide track undercarriage, the two-seat open cockpit machine quickly proved to be an excellent advanced trainer. Powered by a 230 hp Salmson 9Ab radial engine, about 980 had been delivered to the training units of both the French *Armée de l'Air* and the *Aeronautique*

Maritime by June 1940. During the course of their career, the fin and rudder were enlarged and both wood and metal propellers were used. When France fell, many were captured by the Germans and put to use in the Luftwaffe training units.

- Span: 10.70m / 35 ft 2 in)
- Length: 7.00m / 22 ft 9 in)
- Weight: 1,150 kg / 2,533 lb (Fully loaded)
- Max Speed: 205 kmh / 127 mph



© The Archive of Modern Conflict

Heinkel He 111B-2, NA+EB, of KFS 4, Thorn in occupied Poland running up its engines ready for takeoff. This version of the Günther brothers classic bomber was one of the most numerous of the early versions of the breed. In total, some 500 aircraft were built, most of which never saw active service. The aircraft here clearly shows the elliptical wing shape used on the early versions of the He 111 which was inherited from its predecessor, the Heinkel He 70. A closely related version, the -J, was developed for the Kriegsmarine as a torpedo bomber, but in the event were never delivered to the navy. Instead all the Js were sent to bomber wings, only to be phased out in 1939, and handed over to the training schools.

Training by Combat – the bombers

The fortunes of the bomber and transport units had begun to decline in early 1940, when both aircraft and instructional crews from the training schools were requisitioned to take part in the costly air landing operations in Norway and Holland. By doing so, the Luftwaffe staved off the immediate tactical crisis, but stored up problems for the future. This situation was further aggravated by

the appalling losses over Crete between April and June 1941 when some 324 transport aircraft were destroyed. By the time of the disaster at Stalingrad in winter 1942-43, where another 500 aircraft and many of their crews were senselessly sacrificed, the training organisation had already been fatally weakened by shortages of fuel and instructors. Some idea of the perpetual difficulties with which the Schools had to cope can be gained by a brief look at the situation in FFS (C) 15 on 21 March 1941:

	Intended	Actual
Instructors	40	26
Auxiliary Instructors	-	8
Flight trainees	160	209
Aircraft	78	48

As described earlier in the first part of this monograph, the prospective Luftwaffe bomber or transport pilot was required to gain his C1 or C2 licence at a *Flugzeugführerschule* C (FFS C) before he was regarded as competent to fly the larger German machines. (Strictly speaking these two licences should be known as the ELF-1 and ELF-2 – *Erweiterter Luftwaffenflugzeugführerschein* – extended licences.) The demanding syllabus of the C schools meant that appropriately qualified instructors were at a premium, some of the most valuable being ex-Deutsche Lufthansa pilots. These men, who had learnt their trade pioneering long-distance flying in all weathers, were amongst the most experienced pilots in Germany. They were not, however, exempt from the demands of front-line service and the attendant risks. *Table 5*.

As a consequence of the wholesale re-organisation forced upon the Luftwaffe training system in 1943, on 15 October that year

TABLE 5

School	Date Formed	Main Bases Used	Comments
FFS (C) 1 (Pyritz)	January 1940	Sorau-Niederschlesien, Freiwalde	Formed from Fl-Ausbildungs-stelle Sorau and FWS E Stolp-Reitz. In Sorau until October 1942
FFS (C) 1	February 1943	Schweinfurt, Bayreuth-Bindlach	Converted from A/B 51. As B1 from October 1943 until July 1944
FFS (C) 2	1936	Neuruppin	From Fliegerschule Neuruppin - until August 1944
FFS (C) 3	February 1939	Alt-Lönnewitz, Alteno/Nieder-Lausitz, Pretzsch/Elbe, Gahro/Nieder-Lausitz, Prague Letnany?	Became C 3 in January 1940. Until July 1944
FFS (C) 4	November 1939	Sprottau, Aslau/Niederschlesien Sagan-Küpper/Niederschlesien	Until July 1944
FFS (C) 5	April 1934	Neubrandenburg, Anklam	Originally a branch of DVS-Cottbus C 5 from January 1940 until July 1944
FFS (C) 6	July 1937	Burg b/Magdeburg, Kolberg, Pinnow	To Kolberg October 1939 as FFS (C) Stade. C 6 from January 1940 until July 1944
FFS (C) 7	November 1939	Celle, Finsterwalde, Alteno Clermont-Ferrand, Gablingen	Was FS Celle. April 1943 to Clermont-Ferrand, France. Back to Gablingen April 1944. Possibly became A5 in May. Also at Gardemoen, Norway and Radom, Poland?
FFS (C) 8	January 1940 –	Wiener-Neustadt, Eisenstadt, Parndorf, Trausdorf	Was FFS (C) Furth. Closed June 1944
FFS (C) 9	January 1940	Altenburg, Windischenlaibach, Pretzsch/Elbe	Was FFS (C) EPart to Mannheim-Sandhofen in May-August 1941 for Ju 88 training. August 1942 all to Pretzsch. Closed September 1944
FFS (C) 10	November 1939	Fürstenwalde/Spree, Neuhausen, Eggersdorf	Was FFS (C) Landau. From Erding in January 1940 to F/Spree. Closed June 1944
FFS (C) 11	Summer 1939	Zeltweg/Steiermark	Was FFS (C) Zeltweg. C 11 from January 1940. Closed June 1944
FFS (C) 12	January 1940	Prague/Ruzyně	Until June 1942, then became BFS 3
FFS (C) 13	January 1940	Rosenborn/Zopten, Nancy, Toul, Delme, Roth Kiliendorf, Unterschlauersbach, Öttingen	June 1941 to Nancy, France. February 1942 to Roth Kil. Closed June 1944
FFS (C) 14	January 1940	Ohlau/Oder	Became C 19 mid-1941
FFS (C) 14	July 1941 (New formation)	Prague/Gbely	Closed July 1944
FFS (C) 15	January 1940	Lüben/Niederschlesien, Gablingen,	September 1940 to Gablingen. January 1943 to France for He 177 Bourges, Szombathely (Hungary) training. May 1944 to Hungary, equipment to other schools. Closed October 1944
FFS (C) 16	May 1940	Burg/Magdeburg, Weissenwarthe Sachau/Gardelegen	Closed July 1944
FFS (C) 17	January 1941	Pütnitz, Greifswald	Formed from FFS (See) 2. Closed July 1944
FFS (C) 18	End 1941	Lüben/Niederschlesien, Schönfeld-Seifersdorf	Closed July 1944
FFS (C) 19	Mid-1941 – from C 14	Ohlau	Closed June/July 1944
FFS (C) 20	October 1941	Rosenberg/Zopten, Kiev, Rosenborn, Krosno (Poland)	November 1941 to Kiev. To Krosno January 1942. Closed June 1944
FFS (C) 21	October 1941	Bialystok (Poland), Rosken, Thorn,	To Königsberg/Devau November 1943. April 1944 to Hannover-Langenhagen Thorn, Hannover in June. Closed September-October 1944
FFS (C) 22	October 1941	Wien-Aspern, Oels, Liegnitz	Operational until July 1944

TABLE 6

School	Date Formed	Main Bases Used	Comments
BFS 1	October 1935 as Fliegerlehrgang 1	Brandis, Mörtitz/Eilenburg	BFS 1 from January 1940. 15 October 1943 became B 31
BFS 2	November 1938	Neuburg/Donau, Stargard, Brünn	At Stargard from November 1939. BFS 2 from February 1940 and back to Neuburg. May 1942 to Brünn. Became B 32 October 1943. Closed August 1944
BFS 3	December 1939	Königsberg-Devau, Grieslisen, Enzheim, Prague/Ruzyně	June 1941 to Russia, then back to Enzheim. Returned to Grieslisen October 1941. Summer 1942 to Prague. October 1943 became B 33. Closed August 1944
BFS 4	December 1940	Wien/Aspern, Copenhagen-Kastrup	April 1941 to Kastrup. Specialist transport pilots school. October 1943 became B 34. Closed October 1944
BFS 5	December 1939	Rahmel, Marienburg, Stargard, Belgrade, Mielec, Hagenow/Mecklenburg	June 1940 to Stargard. August 1941 to Belgrade for nightfighter crew training. October 1943 became B 35 and moved to Mielec, Poland. December 1943 Hagenow. Closed August 1944
BFS 6	April 1934 in Celle	Radom, Poland	BFS 6 from 1940. Became BFS 7 summer 1941
BFS 6	Reformed June 1941	Wesendorf	Recce crew school from end 1942. BFS 36 from October 1943. Closed October 1944
BFS 7	December 1939	Insterburg, Radom, Braunschweig-Wagum	From BFS 6, summer 1941. October 1943 became B 37 training attack crews. Back to Germany July 1944. Closed November 1944
BFS 8	1941	Belgrade, Stargard, Terespol, Seerappen, Gabbert, Langensalza	From BFS 5. Early 1943 trained heavy transport crews. To Seerappen as B 38 October 1943. At Langensalza December 1944
BFS 9	?	Kaunas, Lithuania	Instructors taken for transport service June-September 1943
BFS 10	May 1943 from A/B 33	Altenburg, Pomssen	School for Wilde Sau night-fighter pilots. October 1943 became JG 110 until end of war
BFS 11	July 1943 from A/B 110	Stubendorf, Ludwigslust	Special night ground attack pilot school. Became SG 111 October 1943. Closed end 1944
JG 112	August 1944	Landau/Isar	Eccentrically numbered fighter conversion school for ex-bomber pilots
BFS Schleswig	Mid-1938	Schleswig	Maritime crew selection centre? Probably renamed soon after October 1939

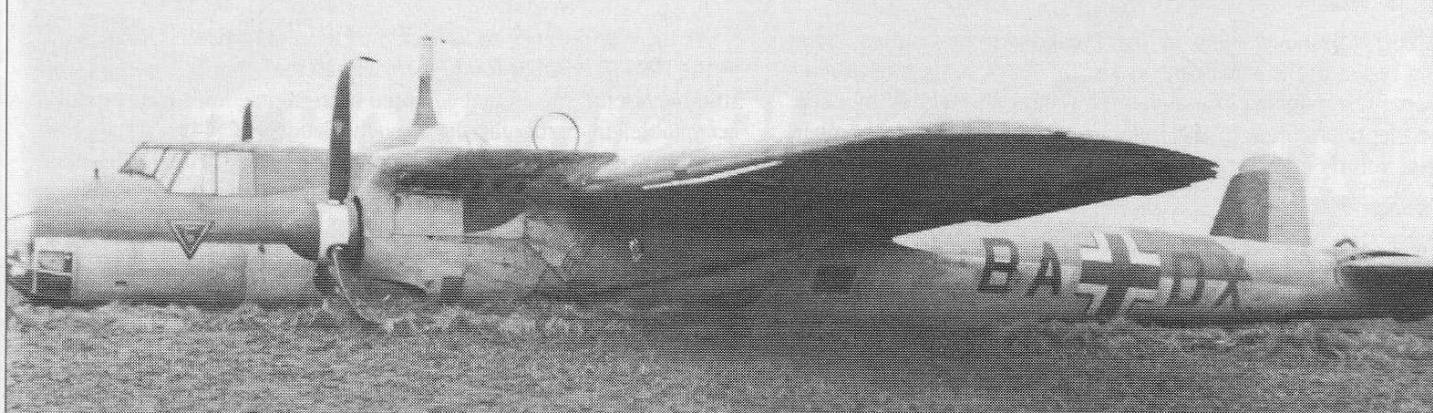
most of these schools were re-designated FFS 'B', retaining the same number as before. e.g. FFS (C) 2 became FFS (B) 2. This was an acknowledgement that the Luftwaffe's most pressing need was for fighter pilots and an indication of the rapidly declining strength of the bomber force which was being frittered away piecemeal. Indeed, by late 1943 the system was almost incapable of producing pilots trained to fly in all weathers.

Eagles in the Clouds

Before he could qualify for the coveted 'C' licence, the trainee needed to learn the methods and techniques of warfare which

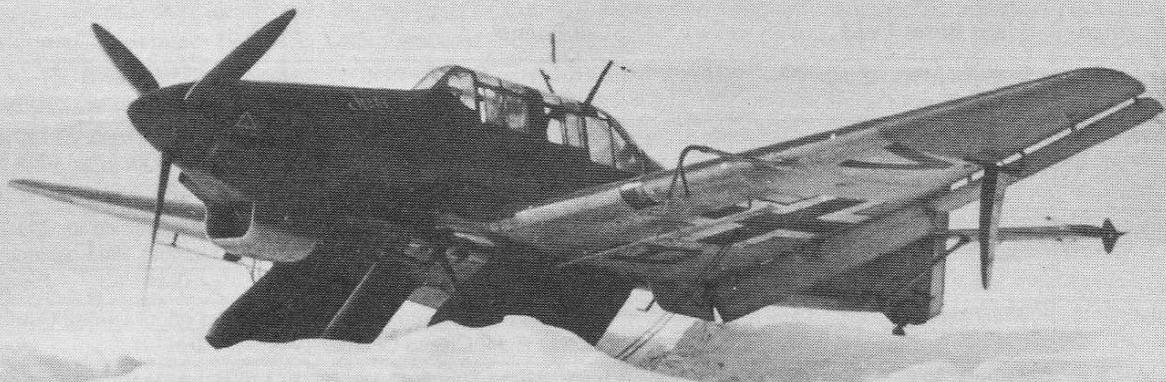
would make him an effective military pilot. In particular, the demands imposed upon bomber, reconnaissance, transport and naval pilots and crews, who were obliged to fulfil their allotted tasks in all types of weather, led to the early establishment of blind and all-weather flying training schools. The first of these was formed at Celle in 1934 under the cover name *Fliegerschule des DLV, Zweigstelle Celle/Wietzenbrueck*! By September 1939 there were five *Blindflugschulen*, (BFS), as listed below. Significantly, even under the stimulus of all-out war, there were never more than a dozen or so of these schools, *Table 6*.

It can be seen that the blind flying schools also fell victim to the upheavals in the training system in October 1943, most of them being renumbered as 'B' schools and contracting the syllabus to B1-B2 level.



© R.L.Ward via B.E.Ketley

Crashlanded Dornier Do 17E, BA+DX. This one is actually in service with the Lufthansa, whose triangular insignia can be seen under the cockpit, but is typical of many used in the training schools. 1 MAY 1941, location unknown, possibly Czechoslovakia. Via R.L. Ward



Another view of a well known Junkers Ju 87A, yellow '6', Werk No. 5040, named 'Irene'. What is not so well known is the underwing code ??+BV, and that the pilot was August Diemer, an instructor at Stuka Vorschule 1, whose girlfriend Irene was. Note the yellow underside wingtips. Bad Aibling, winter 1940-41.

Sharpening the Talons

In the same way that a fighter pilot had to be more than an aerial chauffeur in order to be militarily effective, so the prospective bomber pilot or crew member needed to learn the military tactics and skills appropriate to his calling. The last stage of training before a pilot was posted to an operational unit was a spell at a weapons school (or at least this was the intention until the re-organisation of training in 1943). Having a similar function to an RAF OTU (Operational Training Unit), the first three of these *Grosse Kampfleierschulen* – Bomber Schools – were already in existence in September 1939, KFS 4 being re-formed in early 1940 in newly occupied Poland. Also known as *Waffen Schulen* – Weapons Schools – it should be noted that in line with the German system of training entire crews, these units also trained observers, radio operators and air gunners, *Table 7*.

Table 7

Unit	Main Bases Used
KFS 1	Tutow
KFS 2	Fassberg, Hörsching-Linz
KFS 3	Lechfeld, Warsaw-Okecie, Barth, Greifswald (Originally formed in 1935 as an aerial gunnery school)
KFS 4	Thorn (Torun)
KFS 5	Parow, near Stralsund*

*Parow was also home to a weapons school, Fliegerwaffenschule (See) 3, Dievenow, used by maritime air units

The first ominous signs in the breakdown of bomber crew training began at the same time as the fighter training programme was being re-organised. Initially, a temporary shortage of aviation fuel led to restrictions in the number of flying hours in bomber training. Shortly afterwards, the catastrophe at Stalingrad proved to

be a turning point for the bomber force, when the loss of so many instructor pilots and aircraft led first of all to a severe hiatus in the flow of pupils through the bomber schools and then to an enforced re-structuring of the whole training programme.†

As an emergency measure, bomber pilots were no longer to be trained on multi-engined aircraft at schools, but were to learn their trade, on the job as it were, by flying as second pilots on Junkers Ju 52/3m transport aircraft. Apart from the immediate loss in efficiency of the transport squadrons, the disruption caused a surplus of partly trained pupils in the A/B schools, and a shortage of fully trained crews ready to move from the advanced training schools into the reserve squadrons. In a move typical of the piecemeal fashion in which training was approached in the Luftwaffe, the specialist bomber schools were therefore disbanded and their function dropped onto the reserve training units of the operational bomber Geschwader. This was the exactly opposite approach to the fighter squadrons, and was doomed to failure for precisely the same reasons that the method had had to be abandoned by their fighter comrades, i.e. they had insufficient numbers of trained instructor pilots and aircraft. The result of this was that the partly trained pupils were sent directly to the operational units themselves, whereupon the effectiveness of the squadrons was immediately compromised, losses in men and machines escalated and the offensive power of the bomber force was rendered largely impotent.

In the early part of the war, the land-based C schools were endowed with quantities of obsolete or war-weary front line aircraft, mostly of the types listed as follows, but also with a few of the B2 types:

C2 Land: Do 11, Do 23, He 111, Ju 52/3, Ju 86, Ju 88, Si 204.

As the war progressed, a trickle of more advanced aircraft such as the He 177 bomber found their way to the schools. Shortages of suitable aircraft meant that captured foreign machines were equally acceptable, in particular the French Caudron C.445 and similar types saw extensive service as navigation and instrument trainers before crews commenced instruction on the heaviest C types proper. Brief details of some of the less well known of these types follow:

Dornier Do 23

First flown in 1934, the ponderous Dornier Do 23 bomber was a development of the earlier Do 11 and Do 13 incorporating modifications intended to strengthen the airframe and reduce vibration. The first version, known as the Do 23F was quickly followed by the main service type, the Do 23G. Powered by two

† One of the many possible reasons for the Luftwaffe High Command underestimating the need for transport aircraft with such dramatic effects upon the training system was the existence of Deutsche Lufthansa. The German state airline had had Erhard Milch, Göring's deputy, as a member of the Board since 1926. Due in part to his influence the airline was regarded as a ready-made military transport arm – indeed on the outbreak of war 22 aircraft and crews were promptly requisitioned. However, the easy availability of this organisation may have blinded the Luftwaffe Staff to the need for proper planning, as DLH had only 145 aircraft in total in September 1939 – a totally inadequate number to support military operations when it is remembered that over 300 aircraft were lost on Crete alone.

BMW VIId in-line engines of 750 hp each, the machine was intended to be a supplement to the main Luftwaffe bomber then in service, the Junkers Ju 52/3m. Already obsolescent in engineering terms, the tubular steel structure, mostly fabric covered, was always structurally suspect. The type also left much to be desired in terms of handling and speed, the massive fixed and spatted undercarriage not helping in this respect. Freed from the necessity to disguise their true purpose after the Luftwaffe was revealed to the world, later types of aircraft offered far superior performance and the 200 or so Do 23s built were quickly passed on to the advanced training schools.

- Span: 25.60m / 84 ft 0 in)
- Length: 18.80m / 61 ft 8 in)
- Weight: 9,200 kg / 20,290 lb (Fully loaded)
- Max Speed: 262 kmh / 163 mph

Junkers Ju 86

The first Junkers design to move away from the corrugated structure which had been a trademark of the company since 1919, the Junkers Ju 86 was designed in response to a joint military and civil requirement for a twin-engined aircraft suitable for use as an airliner or bomber. Retaining a family relationship with earlier Junkers types in the shape of the wing and the double-wing flaps, the twin-tail low wing monoplane made use of a narrow track retractable undercarriage which was to be a source of problems throughout its service. The intended powerplants of innovative Junkers Jumo diesel engines of 600 hp each were not available for the first prototype, consequently these were fitted to the Ju 86V3, D-ALAL, which first flew in April 1935 in military configuration. A pre-production batch of thirteen followed in early 1936. At the same time work was proceeding on the civilian version, for which the V2, D-ABUK was the prototype. Following various modifications, KG 152 *Hindenburg* received the first production Ju 86A-1 examples in spring 1936, just as the first 10-

seat Ju 86B airliners reached Lufthansa. By the end of the year both bomber and civil versions had been exported to a number of countries, in every case powered by conventional air-cooled piston engines. Problems with stability led to the introduction of the military Ju 86D with an extended tailcone and greater fuel tankage. However, the greatest problem was the chronic unreliability of the diesel engines, consequently BMW-built versions of the Pratt & Whitney Hornet radial engine were fitted to the Ju 86E. This model began to replace the Ju 86D in squadron service from late summer 1937. Further developments were a batch of 40 or so Ju 86G models with redesigned front fuselages intended to give better pilot vision. By the autumn of 1938, experience in the Spanish Civil War had led to the conclusion that the Ju 86 in any current version was not a good bomber – the rather erratic flight characteristics making accurate bomb aiming very difficult. With the arrival of the greatly superior He 111 and Do 17 bombers into service, the decision was taken to withdraw the 235 examples of the Ju 86 in its several versions from front line use and transfer them to secondary duties. Development of the basic airframe into the long wingspan, high altitude Ju 86P and Ju 86R reconnaissance versions continued well into the mid-war years. Small numbers of these were converted from existing Ju 86D airframes, but the bulk of the remainder went to the bomber schools where they provoked a classic example of the in-fighting amongst the Luftwaffe commanders which bedevilled it until the final collapse.

Faced with growing demands for transport aircraft in early 1940, the front commanders were already requisitioning the Junkers Ju 52/3m transport aircraft, and their instructor crews, which had become the standard training machine in the C schools. This had been logical when no alternative aircraft existed, but no other aircraft in service used three engines and a steering wheel. However, it seemed sensible to the Chief of Staff of the training arm, *Generalmajor Hans Deichmann*, that the Ju 52 be turned over to the transport squadrons and the Ju 86 substituted in the



© The Archive of Modern Conflict

A good closeup of the nose of a Junkers Ju 52/3m of FFS(C) 15, a training unit based at Avord, near Bourges in France from January 1943 for the training of Heinkel He 177 heavy bomber crews. The white number 19 just below the cockpit probably identifies the number of the aircraft in the unit.



Nice shot of an unknown crew member and Heinkel He 46, BO+P?, Werk no 729(?), being readied for flight. Possibly FFS A/B 117, Kamenz 1940.

© The Archive of Modern Conflict

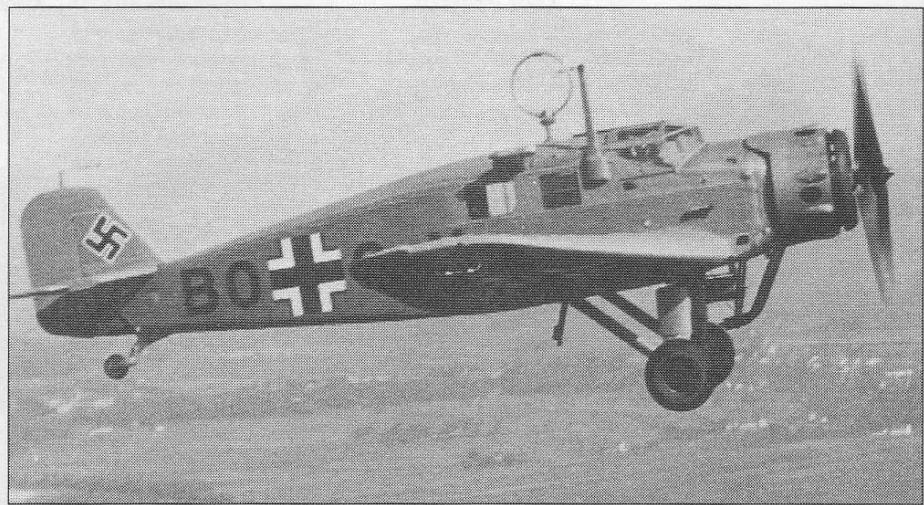
training units. The Ju 86 was not wanted by any other part of the Luftwaffe and, in 1940, the manufacturers still had components for another 1000 examples. With new petrol engines and dual controls the Ju 86 could have become a useful, though short-ranged training machine, when the civilian legacy of its roomy fuselage made it an ideal flying classroom. This eminently practical suggestion was rejected by Erhard Milch, Göring's deputy, on the flimsy grounds that all production capacity was needed for the Ju 88. The true reason for Milch's reaction probably lies in the character of the man, possibly he wished to impress Göring with his grasp of the aircraft industry. Whatever the reason, a logical solution to a growing problem was ignored, the training units were condemned to act as a reservoir of transport crews and aircraft and the training system was doomed to slow decline – but logic was never a strong feature of the Nazi hierarchy. Those models of the Ju 86 which did reach the schools, amongst them the radio school at Halle/Saale, LKS 13, gave sterling service until finally worn out. Data for the Ju 86D-1:

- Span: 22.50m / 73 ft 9 3/4 in)
- Length: 17.60m / 57 ft 9 in)
- Weight: 8200 kg / 18080 lb (Fully loaded)
- Max Speed: 300 kmh / 186 mph

Siebel Si 204

A considerably enlarged development of the neat little Siebel Fh 104, the Siebel Si 204 was developed during 1940-41 by a team led by *Dipl. Ing.* Fecher from Siebel Flugzeugwerke of Halle as a light transport, liaison aircraft and crew trainer. An all-metal low wing monoplane with a dihedral tail with twin fins and rudders, the twin-engined machine could carry up to eight passengers and two crew.

The Si 204V1 first flew in May 1941, powered by two 360 hp Argus As 411 in-line engines driving two-bladed propellers and had a stepped windscreens similar to the Fh 104. Series production of the Si 204A started shortly afterwards. A year later the more powerful Si 204D appeared, fitted with a bulbous glazed nose not



Junkers W 34 hau, BO+?? in flight.

© The Archive of Modern Conflict

unlike the Ju 188. Succeeding the Fw 58 into service as the standard Luftwaffe crew trainer, Si 204 aircraft were produced by SNCAC in France, who turned out about 150 between 1942 and the liberation, and Aero in Czechoslovakia. Most of the Si 204D models were produced in Czechoslovakia, approximately 1,007 being delivered between June 1942 and the end of 1944. Although most machines served as radio, radar or navigation trainers, armed versions were developed for use as light bombers, while a few even saw service as radar-equipped nightfighters. The V22 and V23 served as prototypes for the Si 204E fitted with a revolving glazed gun turret in the dorsal position mounting a single MG 131 machine gun and an internal bomb bay capable of carrying up to

500 kg of light bombs. Post-war, the agreeable flying characteristics and robust structure of the type led to development and production continuing in both France, as the NC Martinet, and Czechoslovakia as the C-103/C-3. Luftwaffe training units known to have used the Si 204D include FFS B 11 and FFS (C)14. Data for Si 204D follows:

- Span: 21.33m / 39 ft 6 in)
- Length: 11.95m / 39 ft 2 1/2 in)
- Weight: 5,600 kg / 12,350 lb (Fully loaded)
- Max Speed: 364 kmh / 226 mph

Ground Attack Schools

In keeping with their specialist roles, there were other types of flying training schools, notably the *Stuka Vorschulen* and *Stuka Schulen* for potential dive-bomber crews. Brief details of the type of training given there were described earlier. However, the changing nature of air warfare meant that the technique of precision dive-bombing of ground and naval targets gradually began to give way to less hazardous methods. Subsequently, the conversion of the operational dive-bomber units from the venerable Ju 87 onto the totally different Hs 129 and ground-attack versions of the Fw 190 eventually led in October 1943 to the wholesale re-designation of the dive-bombing units of the Luftwaffe from *Stuka* to *Schlacht* – literally ‘Battle’ i.e. ground attack. The new equipment demanded a very different training syllabus and the Stuka schools were accordingly modified to become *Schulschlachtgeschwader*. These units, in line with later Luftwaffe training policy, were semi-operational and their designations reflected this. Favourite aircraft

Table 8

Unit	Date Formed	Main Bases Used
Stuka Vorschule 1	1940	Bad Aibling
Stuka Vorschule 2	1939	Graz
Stuka Vorschule 3	1941	San Damiano (Italy)
Stuka Schule 1	1939	Kitzingen, Wertheim
Stuka Schule 2	1939?	Graz-Thalerhof, Piacena (Italy)
St.G 101	1942	SS 1 renumbered December 1942. Wertheim
St.G 102	1942	Graz-Thalerhof, Foggia (Italy)
St.G 103	194?	Metz
St.G 151	1943	Formed from the IV Gruppen of the operational units in May 1943. Agram Schulschlachtgeschwader
SG 101	1943	St.G 101 renumbered October 1943. Closed December 1944. Reims, Wischau, Aalborg-West, Paris-Orly, Brünn
SG 102	1943	Paris-Orly, Agram, Deutsches-Brod
SG 103	1943	Metz, Lyons, Fassberg
SG 104	1943	Tutow, Aalborg-West
SG 108	1943	ex JG 108
SG 111	1943	ex BFS 11 from December 1943. Stubendorf/OS, Ludwiglust
SG 151	1943	Renumbered from St.G 151
		October 1943. Agram, Grove
SG 152	1943	Combined with SG 151 in August 1944. Deblin-Irena

of the initial training units were the Hs 123 and He 50 biplanes and early models of the Ju 87. *Table 8*.

Eyes for the Eagles

Associated with the C schools were the various specialist schools where the requisite skills necessary for other crew members were taught. Amongst these were the vitally important training schools for reconnaissance pilots and observers – the *Aufklärerschulen*. The operational units which these schools served were divided into two broad types based on their primary functions, namely *Nahaufklärer* – tactical or close reconnaissance in support of operations by the army in the field (known as Army Co-operation in the RAF), and long-range *Fernaufklärer* carrying out strategic missions in support of operational planning. The future reconnaissance crews were selected and trained as such. For the first time they were exposed to aircraft fully equipped with an abundance of special equipment including automatic and hand-held cameras, drift-sights, etc. In addition, the special flying techniques so necessary in aerial photography were taught here. *Table 9*.

Table 9

Unit	Date Formed	Main Bases Used
Aufklärerschule 1	1939	Grossenhain/Saxony. Became I.(F)/101 in early 1943. Closed 1944
Aufklärerschule 2	1939	Brieg. Became I.(H)/102 early 1943
Aufklärerschule 3	1939	Jüterbog. Became II.(H)/102 in early 1943
Fliegerbildschule Hildesheim	1935	Formed at Hildesheim in 1935 for training, testing of cameras and photo-interpretation. Active until late in war

Main aircraft equipment of these schools was a selection of He 45, He 46, He 70 and Hs 126 single-engined aircraft and Do 17, Bf 110, Ju 86 and Ju 88 twin engined machines. Oddly, one of the mainstays of the short-range reconnaissance squadrons, the Fw 189, does not seem to have seen much service with the training schools. Later in the war far more potent aircraft, such as camera-equipped versions of the Bf 109, Fw 190 and the jet-powered Me 262 and Ar 234 were necessary to stand any chance of accomplishing missions:

Heinkel He 45

Originally conceived as a general purpose light bomber in response to a requirement of the clandestine Luftwaffe in 1930, the cumbersome He 45 was a typical Heinkel product of the time; a rugged, but unimaginative two-seat biplane design, powered by a single 750 hp BMW VI liquid-cooled engine driving a massive two bladed wooden propeller. The fuselage was of welded tubular steel with metal panels covering the upper fuselage decking and engine, while the remainder and the all-wooden wings were fabric covered. Three prototypes flew in spring 1932; the He 45a, He 45b and He 45c. A production order for 418 unarmed He 45A and 90 He 45B models equipped with one fixed forward-firing MG 17 and one MG 15 on a ring mounting for the observer followed in the autumn, shortly before Adolf Hitler became Chancellor of Germany. Most aircraft were built by Focke-Wulf and BFW owing to lack of space at Heinkel's Warnemünde factory.

By 1934, with better bomber aircraft available, the He 45 was issued instead to the reconnaissance units where they gave adequate if uninspired service. Numerically, they were probably the most important aircraft in the Luftwaffe inventory at the time.

Experience in Spain during the Civil War ensured that by the outbreak of World War 2 all but 21 of the surviving aircraft of the type were in training units, where their rugged construction was of considerable value. FFS A/B 24 is just one training school known to have used the He 45.

- Span: 11.50m / 37 ft 8 3/4 in)
- Length: 10.00m / 32 ft 9 3/4 in)
- Weight: 2745 kg / 6053 lb (Fully loaded)
- Max Speed: 290 kmh / 180 mph

Heinkel He 46

Another of the first generation of aircraft for the newly-emergent Luftwaffe, the He 46 was unusual in that the prototype He 46a was a biplane, while the production versions were parasol monoplanes! Built in 1931 in response to an RWM requirement for a two-seat open cockpit tactical reconnaissance and army cooperation aircraft, early trials proved both that the machine was underpowered and the lower wing seriously impaired the observer's view. Consequently, the third of three prototypes was built as a monoplane with strut braced wings, powered by a 660 hp Bramo 322B radial engine and armed with a moveable MG 15 machine gun for defensive purposes by the observer. Following conventional Heinkel practice, the mixed steel and wooden structure was covered mostly in fabric.

After official acceptance, production of the first 371 He 46C-1s began at Warnemünde in 1933. This version could carry either a camera or up to 200 kg of small bombs in an underfuselage bay. The pressures upon Heinkel were such that sub-contractors such as Fieseler and Gotha were needed to ensure that deliveries began in early 1935. Six D series aircraft, differing only marginally from the C-1 were built, followed by the E model which differed most obviously from other series by being fitted with a cowling for the radial engine. Problems with the engines meant that these cowlings were usually removed in Luftwaffe service, although fourteen unarmed He 46F-1 and F-2 models for training, powered by 560 hp Armstrong Siddeley Panther engines retained theirs.

By 1936 the *Nahaufklärerstaffeln* were completely equipped with the He 46, some of the last examples produced going to Bulgaria (18 C-2s) and Hungary (36 E-2Us). About thirty were sent for trials in Spain, where they suffered heavy casualties in the Civil War. From the spring of 1938, the He 46 began to be replaced by the Henschel Hs 126 and by September 1939 only a few survived in front-line Luftwaffe service. Most of the remaining machines were sent to the training schools, the graveyard of many a Luftwaffe aeroplane, although in 1943 a number were pressed into service for night harassing operations with the *Nachtschlachtgruppen* on the Eastern Front. Data for He 46C:

- Span: 14.00m / 45 ft 11 in)
- Length: 9.50m / 31 ft 2 in)
- Weight: 2300 kg / 5071 lb (Fully loaded)
- Max Speed: 250 kmh / 155 mph

Other Units

So far little has been said of the other essential members of multi-engined aircraft crews in the Luftwaffe. As indicated earlier, there were specialist schools for training navigators (*beobachter*), radio operators (*bordfunker*) and flight mechanics (*bordmechaniker*), but apart from a list of *Luftfottennachrichtenschulen* (Signals Schools) most of these seem to have gone undocumented; *Table 10*.

Briefly, the time to train a navigator was some six months, that for a radio operator being a year. Eventually the individual members were assembled at the Waffenschulen as a complete crew, where they carried out plotted flights, by day and night, formation flying and bombing exercises. They were then posted together to their operational unit.

The radio and navigation schools in particular made extensive use of the ubiquitous Junkers W 34 and Focke-Wulf Fw 58, whose roomy fuselages made ideal flying classrooms:

Focke-Wulf Fw 58 *Weihe* (Kite)

One of the true workhorses of the Luftwaffe, Kurt Tank's Fw 58 was the German equivalent to the Avro Anson. First flown as a six-seater civil transport in 1935, it rapidly developed into numerous military versions ranging from crew trainer to ambulance and even crop sprayer.

Apart from being the first Focke-Wulf aircraft to have a retractable undercarriage, the prototype, D-ABEM, which first flew in summer 1935, was an entirely conventional low wing monoplane. Built from steel tubing with a combination of wood, metal and fabric covering and powered by two 240 hp Argus As 10C air-cooled engines. The very sturdy wing centre section was braced to the fuselage by single struts and an important feature was the ability to change the nose section for different roles. In the passenger V1 this was smoothly streamlined, while on the V2 military prototype provision was made for an open gun position. Only a few of the Fw 58A, production version of the V2, were built before interest moved to the Fw 58B. This was one of the main military versions and featured a glazed nose with a bubble mounting for an MG 15 machine gun and the ability to carry bombs. Some were completed as floatplanes, known as the Fw 58BW.

Main production centred on the Fw 58C, a light transport with a solid nose and accommodation for six passengers. D-ALEX, one of the first of these, became Kurt Tank's personal aircraft, in which he was later unsuccessfully attacked by two Spitfires.

Known affectionately as the *Leukoplastbomber* – elastoplast bomber – by German pilots, the Fw 58 saw considerable use in the training schools, as a light transport for the staff of operational squadrons and, not least, casualty evacuation. About 30 were specially modified to allow spraying of areas on the Eastern Front where there was a risk of disease to German troops.

The *Weihe* was also exported to Argentina, Bulgaria, China, Holland, Hungary, Rumania and Sweden. Twenty-five were built under licence in Brazil. Data for the Fw 58C:

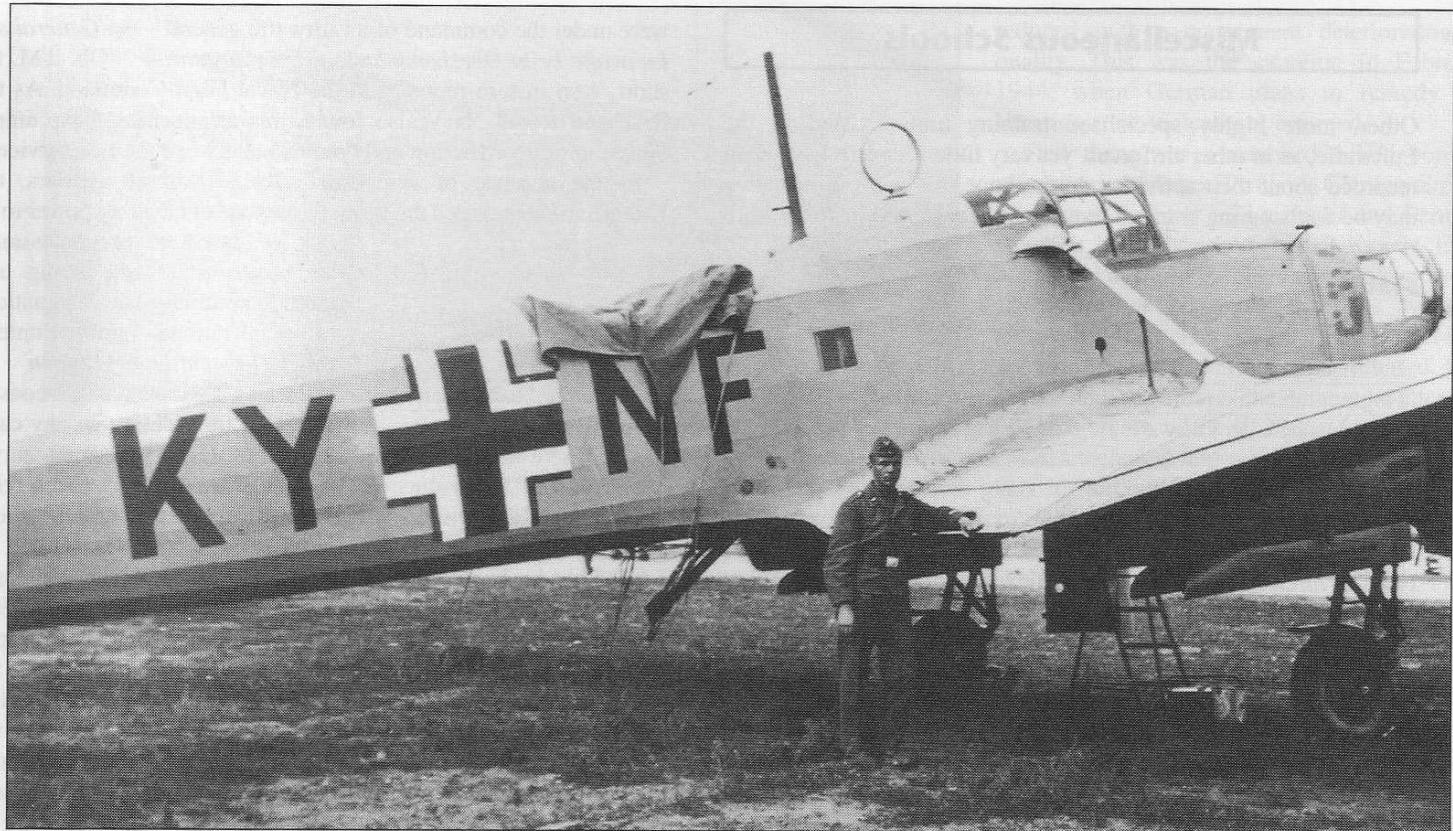
- Span: 21.00m / 68 ft 10 3/4 in)
- Length: 14.00m / 45 ft 11 1/4 in)
- Weight: 3600 kg / 7936 lb (Fully loaded)
- Max Speed: 273 kmh / 170 mph

Junkers W 33 and W 34

Close relatives of the very first all-metal transport monoplane, the Junkers F13, the W 33 and W 34 were developed concurrently in 1926 on the same production line as the F13, or so legend would

Table 10

Unit	Main Bases Used
Luftfottennachrichtenschule 1	Nordhausen
Luftfottennachrichtenschule 2	Königgrätz
Luftfottennachrichtenschule 3	Pocking, Gablenz, München-Reim
Luftfottennachrichtenschule 4	Budweis, Deutsch-Brod, Lyons
Luftfottennachrichtenschule 5	Erfurt
Luftfottennachrichtenschule 6	Dievenow



Focke-Wulf Fw 58, KY+NF, undergoing maintenance. The odd squiggles just behind the nose glazing are red primer paint after small repairs. Overall colour of this machine is RLM Grau 02, a greenish-grey colour. KFS 4 Thorn, 1940.

have it. Differing from the F13 by virtue of a fuselage with greatly enlarged capacity, greater engine power and a modified wing planform, the W 33 was a dedicated freighter with a 170 cubic foot cargo hold, while the W 34 was an airliner with accommodation for six passengers and two crew. In the early versions, the crew sat in an open cockpit, but the cabin was always totally enclosed. Most versions of the W 33 used in-line Junkers engines, while the W 34 used a variety of radials. Featuring the same rugged corrugated aluminium skinning which characterised the F13, both versions were widely exported in the years before World War 2. Built in both land and seaplane versions, the W 33 saw extensive overseas service with operators in such far flung places as China, Canada and New Guinea and inaugurated Lufthansa's regular mail services. Only a few examples of the W 33 survived to see service in the Luftwaffe, that service generally preferring the W 34, probably on account of the more reliable radial engine fitted to the W 34.

Likewise, the W 34 was built in numerous versions from 1927 onwards, the first production W 34b's being D-1119 and D-1294. Airline operators using the W 34 were Eurasia in China, Lloyd Aero in Bolivia, Guinea Airways in New Guinea and several Canadian companies. Later developments of the basic design had enclosed cockpits for the crew, and two of these, the W 34hau with a 650 hp BMW Bramo 322 engine driving a four-bladed wooden propeller and the W 34hi powered by a 660 hp BMW 132A and two-blade propeller, both saw extensive service in the Luftwaffe training schools throughout World War 2. About 100 examples of the W 34 are believed to have been built, the last in Sweden in 1935. For a time the W 34 was standard Luftwaffe equipment, with spartan accommodation for up to twelve passengers, for advanced flight training, blind flying training and radio operator instruction.

Despite being generally well behaved in the air, the marginal centre of gravity of the W 34 could give rise to some interesting moments on the landing run, and too-hasty application of the brakes frequently tipped the bird onto its nose. Units known to have

operated the W 34 include FFS A/B 2, FFS A/B 5, FFS A/B 11, FFS A/B 14, FFS A 32, FFS B 1, FFS (C)3, BFS 33 and LKS 13. Data for the W 34hi landplane:

- Span: 17.75m / 58 ft 2 3/4 in)
- Length: 10.27m / 33 ft 8 in)
- Weight: 3200 kg / 7056 lb (Fully loaded)
- Max Speed: 265 kmh / 165 mph

Caudron C.445 *Göeland* (Seagull)

A twin-engined low wing monoplane with accommodation for up to six passengers and a crew of two, the *Göeland* was one of the most successful products of the French Caudron company in the interwar period. Built almost entirely of wood except for the aluminium nose cone and the fabric covering to the fuselage sides, with an undercarriage which retracted into the engine nacelles, the prototype C.440 first flew in 1934. During the next three years the type proved to be an exceptional aircraft and gained acclaim in several air races.

Several versions of the *Göeland* were built, essentially differing only in the degree of wing dihedral and the engine installation. An interesting point about the type is that the engines both rotated outwards, thereby cancelling out torque effects. So far as is known all aircraft were fitted with one type of Renault inline engine or another; the C.445M trainer, produced for the *Armée de l'Air*, being powered by a pair of 220 hp Renault 6 Pdi's. After the occupation of France, production continued for both the Vichy government and the Luftwaffe. Most war-time models were built by Renault at their Billancourt plant. Little is known about the C.445 in Luftwaffe service, although large numbers were produced for them, FFS B 20 being one known user. Production continued post-war and eventually some 1,702 were built.

- Span: 17.60m / 57 ft 9 in)
- Length: 13.80m / 45 ft 3 3/4 in)
- Weight: 3500 kg / 7700 lb (Fully loaded)
- Max Speed: 300 kmh / 186 mph

Miscellaneous Schools

Other, more highly specialised training units existed in the Luftwaffe, as in other air forces, yet very little seems to have been recorded about their activities. In the hope that more information may be forthcoming some of those known are listed in *Table 11*.

Table 11

Unit Title	Function	Main Bases Used
Bordfunkerschule	Radio Operator School	Halle/Saale. Linked with LKS 13?
Flugzeugführerüberprüfungsschule	Aircrew Check-out Unit	Prenzlau, Pasewalk, Salzwedel
Fluglehrschule der Luftwaffe	Flying Instructors School	Brandenburg-Briest

One other training unit, unique to the Luftwaffe, was the Lehrgeschwader – Training Division. The need to evaluate new types of aircraft, equipment and tactics led to the establishment of a Lehrgruppe in Greifswald in 1936. Essentially, this consisted of a number of small units representative of the many kinds of flying units within the Luftwaffe formed into a larger size which simplified administration, but also allowed different combinations of equipment and tactics to be tried out. Examples of every item of equipment used by the Luftwaffe was delivered for testing to the Lehrgruppe, which worked in close cooperation with the RLM and the various test facilities such as Rechlin and Travemünde. Results from these experiments were then fed back into the Luftwaffe operational units. Eventually, the favourable experience obtained with this unit and the rapid expansion of the Luftwaffe led to two complete Geschwader being in existence by the outbreak of war, being made up as shown in *Table 12*.

Table 12

Lehrgeschwader 1	
Geschwaderstab/LG 1	Greifswald
I.(Schw. Jagd)/LG 1	Barth (Heavy Fighters)
II.(Kampf)/LG 1	Schwerin (Bombers)
III.(Kampf)/LG 1	Greifswald (Bombers)
IV.(Stuka)/LG 1	Barth (Dive bombers)
Lehrgeschwader 2	
Geschwaderstab/LG 2	Garz
I.(Jagd)/LG 2	Garz (Fighters)
II.(Schlacht)/LG 2	Tutow (Ground Attack)
III.(Aufkl.)/LG 2	Jüterbog (Reconnaissance)
10.(See)/LG 2	Travemünde (Marine)
11.(NJ)/LG 2	Garz (Nightfighters)

Perfectly capable of mounting actual operations, LG 1 in particular gained an enviable war record in its own right, possibly at the expense of its intended purpose as an evaluation unit.

Sea Eagles

One of the many organisational anomalies in the Nazi armed forces was that of the small naval air arm – the *Seeluftstreitkräfte*. In a not dissimilar structure to RAF Coastal Command, the actual units

were under the command of a Luftwaffe general – the *General der Luftwaffe beim Oberkommando der Kriegsmarine* – Ob. d.M. for short, who in turn reported to the Naval High Command. As the RAF and Royal Navy also found, this arrangement gave ample opportunities for friction and confusion between the two services.

In the absence of shipborne radar or aircraft carriers, the Kriegsmarine regarded the primary purpose of naval air power to be that of maritime reconnaissance and occasional mine-laying and torpedo bombing. The designations of the operational maritime units – the *Küstenfliegergruppen* – reflected the primarily coastal nature of their duties. In any case, only the larger German naval vessels were capable of carrying

aircraft, and these were only two-seat floatplanes suitable for short-range duties. The longer distance search operations were to be carried out by land-based flying boats, attack capability generally resting with the He 115 floatplanes or land-based bombers. By 1943 most of the naval units had been absorbed into the Luftwaffe proper.

Lack of overwater navigational experience on the part of the Luftwaffe resulted in a similar situation to that of the British Fleet Air Arm in the years preceding World War II whereby most of the members of the crews in the maritime units were from the air force, but navigators and observers were naval personnel. Training was therefore geared to these ends. The specialist nature of marine air

Table 13

School	Date Formed	Main Bases Used	Comments
FWS (See) 1	1934	Parow	Originally DVS at Warnemünde
FWS (See) 2	1934	Bug am Rügen	So named in 1939
FWS (See) 3	1939	Dievenow	Transferred from Warnemünde

warfare, particularly the late development of aerial torpedo attacks upon shipping, led to the logical decision to base the *Flugzeugführerschulen* (See) – marine pilot training schools – around the pre-war experimental and testing stations on the Baltic coast at Warnemünde, Pütnitz and Stettin. Associated with the specialist training of naval aviators were three *Fliegerwaffenschulen* (See) – naval aviation weapons schools i.e. OTUs. On 1 September 1939 these were as shown in *Table 13*.

Main aircraft equipment for the advanced marine schools was as follows:

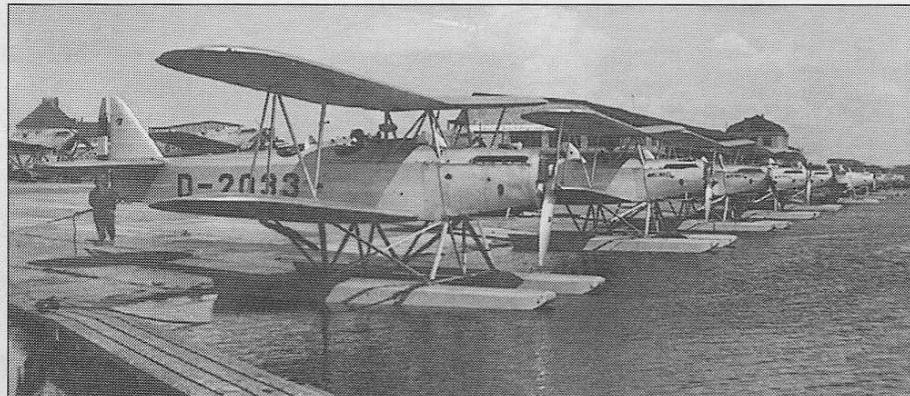
C2 See: Do Wal, Do 18, He 59, He 115.

The Wings are Clipped

“The training for the blind-flying C pilot’s licence was the longest, most costly, most complicated, and from the point of view of wartime operational effectiveness, most important aspect of the entire air training process” – Generalleutnant Werner Kreipe

At the outbreak of the war, there were some 1,505 bombers, 1,325 fighters, 620 reconnaissance machines, 205 seaplanes and 450 transport aircraft in service with the Luftwaffe. Another 1,500 crews were under training in the weapons schools, so that there were about 5,000 crews available, representing some 15,000 men.

Belated recognition by the Luftwaffe General Staff that the war situation in early 1943 had finally forced the Luftwaffe to become a defensive, rather than an offensive force, led to the start of a



A line of Heinkel He 42B training floatplanes drawn up on the slipway at Warnemünde, possibly being used by Flieger Schule 2, Travemünde, 16 July - 30 September 1935. D-2033, the nearest machine was first registered in April 1931 to the DVS, one of the many cover organisations used in the establishment of the clandestine Luftwaffe. Several survived until 1944. This machine certainly survived until at least 1934. Note the small winged 'H' Heinkel trademark on the fin. The two aircraft just visible in the background are Heinkel He 9 monoplane floatplanes, world record holders in their day.

fundamental shift in the composition of the air force. Despite stubborn resistance by Hitler to acknowledge the reality of the position, the more clear-sighted Luftwaffe commanders had seen the need for change in both tactics, aircraft production and the training of crews for these machines. Subsequently, the appointment of *Generalleutnant* Werner Kreipe as Chief of Training in June 1943, and the wholesale re-appraisal of the training units which followed in October, led to a doubling in the output of crews by the beginning of 1944, despite a 20% drop in the number of basic personnel. Not only this, but more modern aircraft had at last begun to reach the training units in 1943, with nearly 1,000 Fw 190 and Bf 109 fighters available in the fighter schools by late 1944. An indication of the shift in emphasis in the offensive/defensive capability of the Luftwaffe is reflected in the number and type of crews qualifying in 1942-43:

Crews	1942	1943
Bomber	1,962	3,231
Day Fighter	1,662	3,276
Night Fighter	239	1,358
Ground Attack	537	1,264
Reconnaissance	192	464

By 1943-44 the Luftwaffe had reached its maximum size with 2,089,000 men under arms. There were, however, several negative aspects to this apparently encouraging picture. Instructors remained in short supply and were a source of constant worry to *Generalleutnant* Adolf Galland, chief of the fighter arm, who was highly critical of the lack of long term planning responsible for such a situation. There was a lack of coordination between the schools and the operational units which meant that pilots would find different practices at the squadrons to those which they had been taught, and the lack of flying time meant that many pilots were still pre-occupied with the technicalities of flying when they arrived at their operational units.

Increasing demands from the battle fronts meant that by 1944 turnover of aircrew was such that in many units only the Gruppe and Staffel commanders had more than six months experience, while the majority of pilots had only seen active service for some 8 to 30 days. Not only this, but in order to achieve the required numbers of new pilots, their training had had to be drastically

reduced with a consequent deterioration in quality. This was the situation in February 1944, when German plans to remedy the situation were violently overturned.

First there was a renewed Allied bomber offensive aimed specifically at German aircraft production facilities – 23 airframe and 3 engine factories being attacked in that month. Even worse, the daylight bombers were accompanied all the way to the targets and back by long-range fighters. The shock to the German defence systems that this represented was enormous. Indeed, until the previous winter, the research branch of the RLM had been claiming

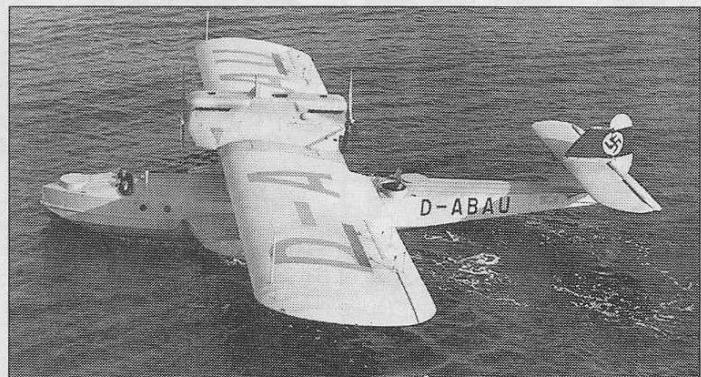
that such a machine was a technical impossibility! At a stroke, all existing German plans for aircraft production and training were thrown into disarray. With the ability to strike almost at will anywhere within the Reich, the arrival of the American escort fighters was to prove a mortal blow.

Subject to the debilitating personality conflicts within the higher echelons of the Luftwaffe command, beset by growing shortages of fuel and instructors, forced into constant moves by the shrinking perimeters of the Reich and now no longer safe even on its own airfields, the training system was no longer capable of allowing the Luftwaffe to recuperate its strength. It was the beginning of the end.

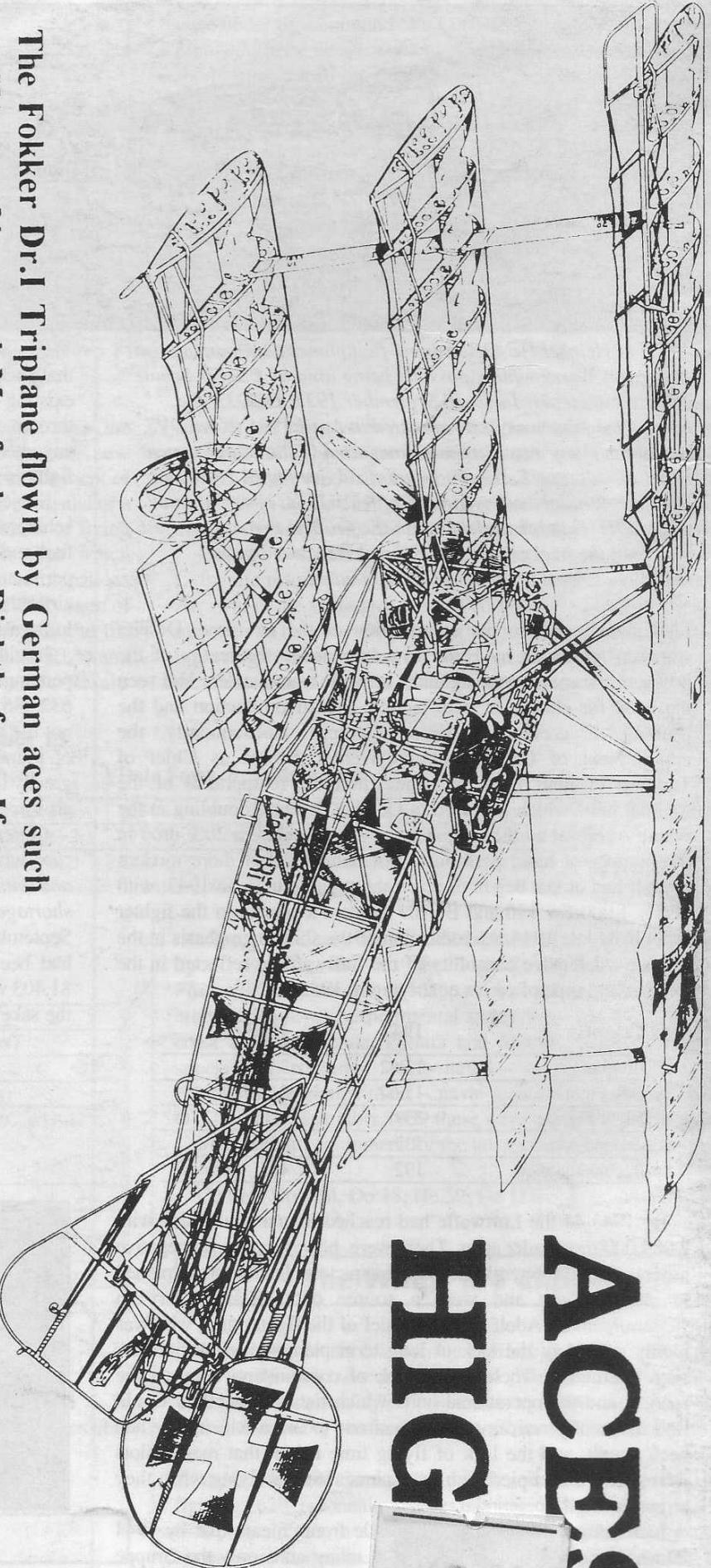
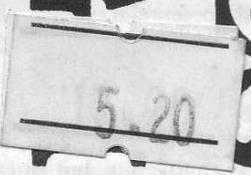
Ironically, by January 1945, the numbers of Luftwaffe flying personnel had reached an all-time high of 26,411 officers and 632,486 NCOs qualified as aircrew. The numbers were there, but not the vital element of quality. Products of the reduced standards of training prevailing at that stage of the war, these men were greatly inferior in terms of skill compared to those of the victorious air force of spring 1940, yet they were no less courageous.

Generalfeldmarschall Erhard Milch may have overstated the case when he claimed that "*The Luftwaffe training programme, and with it the Luftwaffe itself, was throttled to death by the fuel shortage,*" but there can be no arguing with the fact that between 1 September 1939 and 31 December 1944, 9,521 would-be airmen had been killed in training, while 5,993 were injured. Another 81,403 were killed, wounded or went missing on operations. All for the sake of a madman's twisted dream.

B.E. Ketley 1996



ACES HIC



The Fokker Dr.I Triplane flown by German aces such as Werner Voss and Manfred von Richthofen. If you are interested in any aspect of World War One Aviation, join this Society. The annual subscription of £17 (\$30 US) includes a high quality Journal.

Membership Secretary
6 Cowper Road, Southgate
LONDON, N14 5RP

+

CROSS & COCKADE

INTERNATIONAL

THE FIRST WORLD WAR AVIATION HISTORICAL SOCIETY